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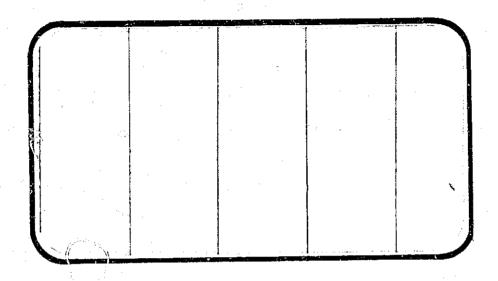
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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION



(NASA-CR-147605) RESULTS OF TEST MA22 IN THE NASA/LARC 31-INCH CFHT ON AN 0.016-SCALE MODEL (32-0) OF THE SPACE SHUTTLE CONFIGURATION 3 TO DETERMINE RCS JET FLOW FIELD INTERACTION, VOIUME 2 (Chrysler N76-27330 HC \$21.25

Unclas G3/18 41864

SPACE SHUTTLE

AEROTHERMODYNAMIC DATA REPORT



JOHNSON SPACE CENTER HOUSTON, TEXAS

DATA MANagement services

SPACE DIVISION CHRYSLER CORPORATION

DMS-DR-2267 NASA CR-147,605 VOLUI 2 OF 4

RESULTS OF TEST MA22 IN .HE NASA/LaRC 31-INCH CFHT

ON AN 0.010-SCALE MODEL (32-0) OF THE

SPACE SHUTTLE CONFIGURATION 3 TO DETERMINE

RCS JET FLOW FIELD INTERACTION

by

D. B. Kanipe Engineering Analysis Division Johnson Space Center

Prepared under NASA Contract Number NAS9-13247

by

Data Management Services Chrysler Corporation Space Division New Orleans, La. 70189

for

Engineering Analysis Division

Johnson Space Center National Aeronautics and Space Administration Houston, Texas

WIND TUNNEL TEST SPECIFICS:

Test Number:

LaRC CFHT 118

NASA Series Number:

MA22 32-0

Model Number: Test Dates:

May 6, 1975 through June 3, 1975

Occupancy Hours:

168

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Chrysler Corporation Space Division assume no responsibility for the data presented other than display characteristics.

RESULTS OF TEST MA22 IN THE NASA/LaRC 31-INCH CFHT

ON AN 0.010-SCALE MODEL (32-0) OF THE

SPACE SHUTTLE CONFIGURATION 3 TO DETERMINE

RCS JET FLOW FIELD INTERACTION

by

D. B. Kanipe Engineering Analysis Division Johnson Space Center

ABSTRACT

Test MA22 was conducted in the Langley Research Center 31-inch Continuous Flow Hypersonic Wind Tunnel from May 6, 1975 through June 3, 1975. The primary objectives of this test were the following: 1) to study the ability of the wind tunnel to repeat, on a run-to-run basis, data taken for identical configurations to determine if errors in repeatability could have a significant effect on jet interaction data, 2) to determine the effect of model heating on jet interaction, 3) to investigate the effects of elevon and body flap deflections on RCS jet interaction, 4) to determine if the effects from jets fired separately along different axes can be added to equal the effects of the jets fired simultaneously (super position effects), 5) to study multiple jet effects, and 6) to investigate area ratio effects, i.e., the effect on jet interaction measurements of using nozzles with different area ratios in the same location. The model used in the test was a .010-scale model of the Space Shuttle Orbiter Configu-

ABSTRACT (Concluded)

ration 3. The test was conducted at Mach 10.3 and a dynamic pressure of 150 psf. RCS chamber pressure was varied to simulate free flight dynamic pressures of 5, 7.5, 10, and 20 psf.

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SCHEDULE OF COEFFICIENTS PLOTTED:

- (A) CN, CLM, CAU, CBL, CYN, CY versus ALPHA
- (B) CLM, CN versus ALPHA
- (C) CBL, CYN versus BETA
- (D) CN, CLM, CAU, CBL, CYN, CY versus TEMP
- (E) DLTCN, DLTCLM, DLTCAU, DLTCBL, DLTCYN, DLTCY versus TEMP
- (F) DLTCN, DLTCLM, DLTCAU, DLTCBL, DLTCYN, DLTCY versus ALPHA
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- (J) N(PM), N(RM), N(YM), N(NF), N(AF), N(SF) versus BETA

NOMENCLATURE

SYMBOL	SADSAC SYMBOL	DEFINITION
5		speed of sound; m/sec, ft/sec
Cp	CP	pressure coefficient; $(p_{\underline{l}} - p_{\varpi})/q$
M	MACH	Mach number; V/a
p .		pressure; N/m ² , psf
q	Q(NSM) Q(PSF)	dynamic pressure; $1/2\rho V^2$, N/m^2 , psf
RN/L	RN/L	unit Reynolds number; per m, per ft
v		velocity; m/sec, ft/sec
æ	ALPHA	angle of attack, degrees
β	BETA	angle of sideslip, degrees
ψ	PSI	angle of yaw, degrees
$oldsymbol{\phi}$	PHI	angle of roll, degrees
p - 1		mass density; kg/m3, slugs/ft3
	Refe	rence & C.G. Definitions
Ab		base area; m ² , ft ²
b	BREF	wing span or reference span; m, ft
c.g.		center of gravity
L _{REF}	LREF	reference length or wing mean serodynamic chord; m, ft
S	SREF	wing area or reference area; m ² , ft ²
	MRP	moment reference point
	XMRP	moment reference point on X axis
	YMRP	moment reference point on Y axis
	ZMRP	moment reference point on Z axis
SUBSCRIPTS b 1		base
s t œ		static conditions total conditions free stream

Body-Axis System

SYMBOL	SADSAC SYMBOL	DEFINITION
$\mathbf{c}^{I\!\!\!/}$	CN	normal-force coefficient; normal force qS
c _A	CAU	axial-force coefficient; axial force (uncorrected)
CY	CA	side-force coefficient; side force qS
$\mathtt{c}_{\mathtt{A_b}}$	CAB	base-force coefficient; base force
c_{A_f}	CAF	$-A_b(p_b - p_{\infty})/qS$ forebody axial force coefficient, $C_A - C_{Ab}$
C _m	CIM	pitching-moment coefficient; pitching moment qSLREF
C _n	CYN	yawing-moment coefficient; yawing moment qSb
c _L	CBL	rolling-moment coefficient; rolling moment
		Stability-Axis System
$\mathbf{c}_{\mathbf{L}}$	CL	lift coefficient; lift qS
$\mathbf{c}_{\mathtt{D}}$	CD	drag coefficient; drag qS
$c_{D_{f b}}$	CDB	base-drag coefficient; base drag
$\mathbf{c}_{\mathbf{D_{f}}}$	CDF	forebody drag coefficient; $c_D - c_{D_b}$
$c_{\mathtt{Y}}$	CY	side-force coefficient; $\frac{\text{side force}}{\text{qS}}$
C _m	CIM	pitching-moment coefficient; pitching moment qS/REF
· _ c	CLN	yawing-moment coefficient; yawing moment qSb
c _L	CSL	rolling-moment coefficient; rolling moment qSb
T/D	L/D	lift-to-drag ratio; C _L /C _D
L/Df	L/DF	lift to forebody drag ratio; $c_{\mathrm{I}}/c_{\mathrm{Df}}$

Plot Symbol Symbol	<u>Definition</u>
A _e	nozzle exit area, in ²
Cej : San	RCS jet rolling moment coefficient, $(T_{\ell_{\mathcal{R}}})/(qSb)$
c _{mj}	RCS jet pitching moment coefficient, $(T_{\ell_m})/(qS\bar{c})$
$c_{\mathbf{n_j}}$	RCS jet yawing moment coefficient, $(T_{R_n})/(qSb)$
c _{Aj}	RCS jet axial force coefficient, (T)/(qS)
c _{Nj}	RCS jet normal force coefficient, (T)/(qS)
c _Y j	RCS jet side force coefficient, (T)/(qS)
	nozzle expansion ratio
j h iji sasa isa isa isa isa	altitude, feet
k _i	model nozzle thrust calibration factor, lbs/psia
e _e	RCS nozzle rolling moment arm, in
e _m	RCS nozzle pitching moment arm, in
^ջ n	RCS nozzle yawing moment arm, in
^l orb	Orbiter body length, in
	left hand side
nj	RCS jet mass flow rate, lbm/sec
g <mark>Mg</mark> Elektrije en gebrek	RCS jet exit Mach number
9	RCS roll jet amplification factor, $(\Delta C_{\ell})/(C_{\ell j})$

Symbol	Plot Symbol	<u>Definition</u>
N _m	N(PM)	RCS pitch jet amplification factor, $(\Delta C_{\mathrm{m}})/(C_{\mathrm{m_{j}}})$
Nn	N(YM)	RCS yaw jet amplification factor, $(\Delta C_n)/(C_{n_j})$
NA	N(AF)	RCS axial force jet amplification factor, $(\Delta C_{A_j})/(C_{A_j})$
и <mark>N</mark>	N(NF)	RCS normal force jet amplification factor, $(\Delta C_N)/(C_{N_j})$
Ny	N(SF)	RCS side force jet amplification factor, $(\Delta C_{\gamma})/(C_{\gamma_{j}})$
P _C	PCRCS	model RCS nozzle plenum chamber pressure, psia
Pj		RCS jet exit pressure, psia
RCS		reaction control system
RH		right hand side
RT		product of RCS nozzle gas constant and temperature, (ft-1b)/1b
t T oronton		RCS thrust, 1bs
$T_{\mathbf{c}}$	TCRCS	RCS chamber temperature, °R
U		velocity, ft/sec
Մյ		RCS jet velocity, ft/sec
Xo		Orbiter longitudinal station, in
Yo		Orbiter lateral station, in
Zo		Orbiter vertical station, in
ΔC _L	DLTCBL	incremental rolling moment coefficient due to RCS jet interaction

<u>Symbol</u>	Plot Symbol	<u>Definition</u>
ΔC _m	DLTCL.M	incremental pitching moment coefficient due to RCS jet interaction
ΔCη	DLTCYN	incremental yawing moment coefficient due to RCS jet interaction
ΣCN	DLTCN	incremental normal force coefficient due to RCS jet interaction
ΔCγ	DLTCY	incremental side force coefficient due to RCS jet interaction
ΔC _A _u	DLTCAU	incremental axial force coefficient due to RCS jet interaction (uncorrected for base pressure)
Υ		jet gas specific heat ratio
Σkį		sum of model nozzle thrust calibration factors for all nozzles installed on model during a given test run, lbs/psia
Θ		RCS mozzle angle, deg.
T/qA	T/QA	RCS thrust divided by freestream dynamic pressure times unit area
	T/QA-1	one jet RCS thrust divided by freestream dynamic pressure times unit area
ΔN _R	DN(RM)	incremental RCS jet amplification factor - rolling moment
ΔN _m	DN(PM)	incremental RCS jet amplification factor - pitching moment
ΔN _n	DN(YM)	incremental RCS jet amplification factor - yawing moment
ΔN _N	DN(NF)	incremental RCS jet amplification factor - normal force

NOMENCLATURE (Concluded)

	Symbol _	Plot <u>Symbol</u>	<u>Definition</u>
	ΔΝγ	DN(SF)	incremental RCS jet amplification factor - side force
	ΔNA	DN(AF)	incremental RCS jet amplification factor - axial force
	σ,		one standard deviation from the mean
	$\ddot{\mathbf{X}}$		computed mean
	δBF	BDFLAP	Orbiter body flap surface deflection angle, positive deflection trailing edge down, degrees
	ô e	ELEVON	Orbiter elevon surface deflection angle, positive deflection trailing edge down, degrees
· · · · · ·		NO. JET	number of RCS jets firing
		TEMP	wing temperature, degrees Fahrenheit

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REMARKS.

After being subjected to Mach 10 airflow at a dynamic pressure of 150 psf for a period of time, wind tunnel models tend to heat up to temperatures as high as 500°F. Therefore, in an effort to determine whether or not model heating could affect jet interaction measurements, the model was inserted into the tunnel and data was taken as the model heated up. At each data point the temperature of the model wing was recorded by hand. These temperatures can be found in Table VII. Both RCS jets-on and RCS jets-off data were taken as a function of wing temperature. Little effect was observed.

¹、张明则是基础的,并且一种更大的基础的原理。

CONFIGURATIONS INVESTIGATED

Three kinds of model changes were required for this test: 1) body flap, 2) elevons, and 3) non-metric RCS nozzle blocks. Twenty two nozzle blocks were used in this test. Nozzles N43, N44, N47, N48, N49, N50, N51, N52, and N61 were used in tests OA85 and OA105. Nozzles N31, N32, N33, N34, N36, and N37 were used in test LA25. Nozzles N78, N79, N81, N82, N83, N84, and N85 were used in test OA82. Nozzle configurations are summarized in Table IV.

Two body flap configurations, in addition to the zero degree setting, were tested. The body flap deflections tested were 13.75° and -14.25° . Similarly, elevon deflections tested were 10° and -30° .

INSTRUMENTATION

The LaRC 0.75-inch six-component 2019A internal balance was used for this test program.

No model base or balance chamber pressures were measured during the test. The RCS supply pressure was set and monitored at the plenum chamber between the left hand and right hand RCS nozzle blocks.

TEST FACILITY DESCRIPTION

The Mach 10 nozzle of the Langley Continuous Flow Hypersonic Tunnel is designed to operate at stagnation pressures of 15 to 150 atmospheres at temperatures up to 1960° R. Air is preheated electrically by passing through a multi-tube heater. The nozzle has a 31-inch square test section which incorporates a moveable second minimum. Continuous operation is achieved by passing the air through a series of compressors. Additional information on this facility is given in NASA TM X-1130 entitled, "Characteristics of Major Active Wind Tunnels at the Langley Research Center", by William T. Schaefer, Jr.

DATA REDUCTION

Aerodynamic forces and moments were reduced to coefficient form using the following reference dimensions:

Reference Area:

$$S = 0.269 \text{ ft}^2 (38.736 \text{ in}^2), \text{ model scale}$$

= 2690.0 ft², full scale

Reference Lengths:

c = 4.748 in.model scale = 474.8 in.full scale b = 9.367 in.model scale = 936.7 in.full scale

The moments were reduced about a moment reference center located at:

Orbiter station 10.767 at $Y_0 = 0.00$ and $Z_0 = 3.75$ model scale $X_0 = 1076.7$, $Y_0 = 0.0$, and $Z_0 = 375.0$ full scale

Standard LRC data reduction techniques were employed for reducing the data to coefficient form.

Reduced coefficient data were used to determine RCS jet interaction amplication factors. Incremental coefficient data (ΔC_m , ΔC_{ϱ} , ΔC_n , ΔC_{ϱ} , and $\Delta C_{A_{u}}$) were computed to provide effects of RCS jets. Amplification factors were computed for each plane of action:

$$N_{m} = \frac{\Delta C_{m}}{C_{m_{j}}} = \frac{\Delta C_{m}}{(T \ell_{m})} = \frac{qS\bar{c}}{P_{c} \ell_{m} \Sigma k_{j}} \Delta C_{m}$$

$$N_{\mathcal{L}} = \frac{\Delta C_{\mathcal{L}}}{C_{\mathcal{L}_{j}}} = \frac{\Delta C_{\mathcal{L}}}{(T_{\mathcal{L}_{\mathcal{L}}})} = \frac{qSb}{P_{C}^{\mathcal{L}_{\mathcal{L}}\Sigma k_{j}}} \Delta C_{\mathcal{L}}$$

DATA REDUCTION (Continued)

$$N_{n} = \frac{\Delta C_{n}}{C_{n_{\hat{j}}}} = \frac{\Delta C_{n}}{(\frac{T L_{n}}{qSb})} = \frac{qSb}{P_{c} L_{n} \Sigma k_{\hat{j}}} \Delta C_{n}$$

$$N_{N} = \frac{\Delta C_{N}}{C_{N,j}} = \frac{\Delta C_{N}}{(\frac{T}{CS})} = \frac{qS}{P_{C}\Sigma k_{j}} \Delta C_{N}$$

$$N_{\gamma} = \frac{\Delta C \gamma}{C \gamma_{\hat{j}}} = \frac{\Delta C \gamma}{(\frac{T}{C S})} = \frac{qS}{P_{\hat{c}} \Sigma k_{\hat{i}}} \Delta C_{\gamma}$$

$$N_A = \frac{\Delta C_{A_U}}{C_{A_j}} = \frac{\Delta C_{A_U}}{(\frac{T}{GS})} = \frac{gS}{P_C \Sigma k_i} \Delta C_{A_U}$$

where

\$\mathcal{L}_m = RCS pitch jet moment arm = 4.523 in model scale

eg = RCS roll jet moment arm = 1.110 in model scale

 ℓ_n = RCS yaw jet moment arm = 4.588 in model scale

 Σk_i = sum of k_i 's for all nozzles firing in the same thrust plane, k_i given in Table VI

 $S,\bar{c},b = as given above$

The resulting factors (N's) represent amplification of Orbiter aero-dynamic forces caused by RCS jet interaction with the Orbiter flow field. They are normalized by RCS jet thrusts to allow easy use in control analysis.

The incremental RCS jet amplification factors due to a control surface deflection of amount "a" were computed as follows:

DATA REDUCTION (Concluded)

$$\Delta N_{m} = N_{m_{\delta=a}} - N_{m_{\delta=o}}$$

$$\Delta N_{g} = N_{g_{\delta=a}} - N_{g_{\delta=o}}$$

$$\Delta N_{n} = N_{n_{\delta=a}} - N_{n_{\delta=o}}$$

These factors (ΔN 's) represent the incremental effect of control surface deflections on RCS jet interaction.

The incremental coefficient data do not include thrust forces since the model nozzles were non-metric. Increments and amplification factors were computed for each force and moment plane using data from each nozzle that was tested. This provides both direct (e.g. ΔC_{m} due to pitch jet) and cross-coupling (e.g. ΔC_{m} due to yaw jet) effects. Resulting data are presented in the data figures.

REFERENCES

T. DMS-DR-2195 (NASA-CR-134,442) "Results of Test OA82 in the NASA/LRC 31-Inch CFHT on an O.010-Scale Model (32-0) of the Space Shuttle Configuration 3 to Determine RCS Jet Flow Field Interaction and to Investigate RT Real Gas Effects" by D. E. Thornton, January 1975.

EST: MA22			DATE # July, 1975					
	TEST CON	IDITIONS						
MACH NUMBER	REYNOLDS NUMBER (per unit length)	DYNAMIC PRESSURE (pounds/sq.ft.)	STAGNATION TEMPERATUS (degrees Fahrenheit)					
10.3	1.0 x 10 ⁶	150.0	1350					
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			<u> </u>					
			· · · · · · · · · · · · · · · · · · ·					
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	CAPACITY:	ACCURACY:	COEFFICIENT TOLERANCE:					
. Harring the second	70 1bs	0.35 lbs						
eka Pilipaten SF IS	25 1bs	0.125 lbs						
AF 1	15 1bs	0.075 lbs						
PM	70 in-1bs	<u>0.35 in-l</u> bs						
RM	<u> 15 in-1bs</u>	<u>0.075 in-</u> lbs						
YM .	25 in-1bs	<u>0.125 in-</u> 1bs						
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COMMENTS:								

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[&]quot;5" DATASETS CONTAIN QPSF), PCRCS, T/QA, L/D as dependent variables.

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DATA SET	CONFIGURATION		СНО		1-7			METERS	/VALL	ES			NO. OF RUNS	MAC	н иимве	RS	<u></u>
		-	β	,	· T/QA-	7							RUNS	10.3			
RJA186 T 187	Ø1N79	D D	0°		47.5	00	00		<u> </u>				<u> </u>	186			_
188						 _ _								187			
- 			+3 ^C	- 1 t.	<u> </u>			ļ					\$	188			
189		- -	00		95.0									189			
190		- -	- 3		<u> </u>									190			
191		- -	+ 3]_ _	\ \									191			
192		_ _	00		190.0									192			_
193		$\bot \bot$	-3°											193			
194		14	+ 3°		<u> </u>									194			
195		A	00		0.0									195			
196		_			47.5									196			_
197				->	95.0									197		+	
198	V			1	190.0									198	_		_
199	Ø1N49			2	47.5						-			199			
200				7	95.0						 		-	200		+	_
201					190.0	_	11				<u> </u>			201	- 		-
202		111			0.0	11	1-1			···········	 			202	_		\dashv
₹ 203	Y	D	1	4	47.5	$\downarrow \downarrow$	\							203		-	\dashv
7	13 19	ر ان جوموستان د	2:		31								-	2031			
Luli							37	4		49	<u> </u>	55	6	1	67	·	75
α OR β	$A, \alpha = -8^{\circ}$	to 10	0;2	\ ∠ =	2° ε αζ =	FFICI	ENTS to 3	<u></u> 5 ⁰ ;Δρ	(= 5°	<u>-I </u>	<u>Ll.1.1.</u> ·	<u> </u>		IDVAR 1)	IDVA	R (2)	N

-	HT 118 (MA-22)		DATA SET/RU	N NUMBER	COLLATIC	N SUMMAR	DATE	: 7/11/7	5		
DATA SET DENTIFIER	CONFIGURATION	SCHD. α'β	· 1-7-7-	PARAM	ETERS/VALU	ES	entransportation of the statement of	#2 :#anhanka.	NUMBER	35	
RJA204	Ø7 N49	D -3°	Jets TRA-I				RUNS	10.3			
205				00 00		-		204			
206		1 13	V 05 0					205			_
207			95.0	<u></u>				206			
208		+3°						207			-
209		1 00	190.0					208			-
210	<u> </u>	-30	190.0					209		1	
211	- V	—— - 						210			1
212	Ø1N83		<u> </u>			,		211		1	1
213	#110J	. 00	3 47.5	 				212		1	1
		-3°						213			1
214		1 +3°	 					214		 	1
215		00	0.0	<u> </u>				215	-		1
216		-30						216			ļ
217		+30						217	-		
218] 0°						218			
219		-30					1	219	1		}
220	 	+30						220	 		į
V 221	<u> </u>	V 00 1	95.0	/ 4			-	221			
7	13 19	25	31	37	43	49		and the second second	mer sen		
<u> </u>	A, $\angle = -8^{\circ}$ D, $\angle = -10^{\circ}$	<u> </u>	<u> </u>	<u></u>	. 1		55 61	<u> </u>	67	75	

DATA SET	CONFIGURATION	S	сно.				PARA	METERS	VALUE	S		NO. OF RUNS	1 	ACH N	UMBERS	,	<u>.</u>
DENTIFIER	CONFIGURATION	а			TRAT	Se.	SBE					RUNS	10.3				_
RJA222	Ø1N83	D	-30	3	95.0	٥) o°						222		<u> </u>		_
223			+3		1							<u> </u>	223	<u> </u>		<u> </u>	_
224			0°		190.0								224				
225			-3°										225				
226		1	-3°		\ \								226	• .			
227		Α	0°		0.0								227				
228			1		190.0			1.					228				_
229					95.0								229				_
230	V		$\dagger \dagger$	V	47.5								230	·············			_
231	Ø1N79N78	D	1	2									231				_
232		1	-3°				11						232			<u> </u>	_
233			+3				- -						233				_
234	•		00		95.0					· · · · · · · · · · · · · · · · · · ·			234				-
235		$\dashv \vdash$	-3										235	•			-
236			+3										236	 -			-
237			100		190.0								237	:			-
238		+	-3°		1								238	·			-
√ 239		1	+3°	\forall		\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\							239			 	-
			<u> </u>		بىر يىس بىنى ئادىجى بىرى بىرى		<u></u>	L						·		L	ز ۾
· 7				25	31		37		E,A	49	. 55	·····	61		67		7
بليبا	$\beta \qquad \frac{A, \ \alpha = -8^{\circ}}{D, \ \alpha = -10^{\circ}}$ ES $\frac{D, \ \alpha = -10^{\circ}}{D}$		لـــلــا - ٥		-0 ^{C(})EFFI	CIEN	TS_o.			<u> </u>		LLLL	1 J R (1)	IOVAI	 R (2)]

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DATA SET			CHD,				-	COLLATION TERS/VALI	hat berrittalang	TERMINENCO COM	E-		7/1	· · · · · · · · · · · · · · · · · · ·			
DENTIFIE		· 1	β	Jet	ST/QA-1	50		ETERS/VALI	J E 5	T	1	NO. OF RUNS	10	ACH NI	UMBER	5	
RJA240	Ø1N79N78	A	00	2	0.0		13.7	75	***************************************			-	240			100	(grid.)
241		11			47.5		-					-	241	-		1	•
242					95.0				Make a see special special part	-}	1		242		 	-	_
243	1			V	190.0					<u> </u>			243		-	-	-
244	Ø1N79			1:	0.0				_				244			-	-
245				T	47.5								245		-	-	
246					95.0				1	1			246				-
247	↓				190.0								247			-	
248	Ø1N85N50			2	47.5								248			-	
249				T	95.0								249			-	-
250	V				127.7								250			 	-
251	Ø1N49		 		. 47.5					1	·		251			 	-
252					95.0	_			1				252	1			-
253				V	190.0								253				-
254	Ø1N83		7	3	47.5				-				254		·	 	-
255			\top	T	95.0								255				-
256					190.0		\						256			<u></u>	_
Ý 257	4	V	√	V	0.0	1	-14.2	5					257		,	·	-
	7 13 19	. I. a.	2		31	***************************************	37	43	49		55	N777	1	***************************************		- 	æ

0.0 √

A, $\alpha = -8^{\circ}$ to 10° ; $\Delta A = 2^{\circ}$ & $\alpha = 15^{\circ}$ to 35° ; $\Delta K = 5^{\circ}$

 $D, \propto = -10^{\circ}, 0, 10^{\circ}, 20^{\circ} \in 35^{\circ}.$

0.0-300

Jets T/QA-11Se

47.5

0.0

95.0

00

SCHD

α β

Δ

DATA SET/RUN NUMBER COLLATION SUMMARY

-14.25

PARAMETERS/VALUES

DATE: 7/11/75

258

259

260

274

IDVAR II

IDVAR (2

NOV

MACH NUMBERS

TEST

DATA SET

DENTIFIER

.RJA258\

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SCHEOULES

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260

CFHT 118 (MA-22)

Ø1N83

CONFIGURATION

DATA SET	CONFIGURATION	so	сно.	1	٠.	- CT-474	PARAMETERS	S/VALUE	C.	parametrica de la companya de la co	CAN CONTRACTOR OF	***************************************	H NUMBE		
DENTIFIER	JOHN TOOKATION	α	β	Jet	ST/RA-	Se	SpF.		7		NO. OF RUNS	10.3	HNUMBE	H5	
RJA276	Ø1N79N78	Α	00	2			-14.25		AND DESCRIPTION OF THE PERSONS			276		,	, es_
277					0.0						-				
278					95.0					1	-	277			-
279	↓			\downarrow	190.0							278 279		-	
280	Ø1N79			. 1	47.5					- 		—··			
281				T	95.0							280			
282	1			V	190.0						-	281		_	_
283	ØN85N50			2	47.5					-		282			_
284		11-1	11	777	95.0	╼┼╾┼				- 		283			
285		1+-1	+1	$\sqrt{}$	127.7							284			
286	Ø1N49	┨╂╾╂	+		47.5							285			
287		╢┼┼	 - -	2	95.0							286			_
288		╁┼╌┠	┼┤╴	╁		- -				_[287			
289		┨┼╌┼	- -	╁┼	190.0	- -				.]		288			
	_ <u>Y</u> Ø1N83		 	<u> </u>	0.0	<u> </u>						289			-
291	911103		 .	3	0.0	- -						290			1
292		╟╌┼	- -	Ţ -	47.5							291			1
293		 	 - -	\- \-	95.0	<u> </u>						292			1
433	V	A		Υ	190.0	4	Y					293			1
7	13 19		25		31 '		37 4.	3	49	55	5 4		. marine and a second	-	ī
<u> </u>	$ \begin{array}{ccc} A, & \swarrow = -8^{\circ} & t \\ 5, & \swarrow = -10^{\circ}, \end{array} $		بناب		<u></u>	111	11111	1.1.1.1	11111				67		-

DATA SE	CONTRACTOR		CKD		THE PERSON NAMED IN COLUMN	** P 2:7 3***	PARA	METER	S/VAL	JES			1	T	MACH I	NUMBER		
DENTIFIE.	R		β	Ue t	s /RA-I	Se	Spe		1	7		7	NO. RUNS	10.		10111827	" —	_
RJA294	ØIN83	A		3	0.0	-30°	0°							294	1			~
295					47.5									295	 			-
296					95.0								1	295	1	-		_
297	V			1	190.0				1		 			297	1	+	-	
298	Ø1N49			2	47.5									298		1-	1	-
299				IT	95.0				1					299		1		_
370	1 1			V	190.0					1	1		1	300	 	1		
301	Ø1N79			1	47.5									301		-	-	~
302				IT	95.0									302		 	+	_
303			П	V	190.0			-,						303		 	 	
304	Ø1N84			2	47.5			·		 				304		 	 	_
305				T	95.0					1				305		 	+	÷
306					127.7					-	<u> </u>	 	1	306		-	-	_
307	1			V	0.0									307		 	 	
308	Ø1N85			2	0.0									308	 		-	-
309				1	47.5		11					<u>, , , , , , , , , , , , , , , , , , , </u>		309	· · · ·		 	_
310			\prod	V	95.0					1		-		310	 .	<u> </u>	 	÷
311	Ø1N85N50	¥	小	2	47.5	$\sqrt{}$	\forall		i-					311			-	
	7 13 19		 2	.5	31	والمراجعة والمراجعة	37		43	h recenned eo	- Indiana	************				.Po liciano	<u> </u>	r.c
1.1.1		1 1 1	, 1							49		55		51	····	67	-: '	7

IDVAR (2) NOV

A, $\angle = -8^{\circ}$ to 10° ; $\Delta \angle = 2^{\circ}$ $\epsilon \angle = 15^{\circ}$ to 35° ; $\Delta K = 5^{\circ}$ D, $\Delta = -10^{\circ}$, 0, 10° , 20° $\epsilon 35^{\circ}$.

DATA SET/RUN NUMBER COLLATION SUMMARY

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SCHEDULES

TEST: CFHT 118 (MA-22)

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rai. Ch	HT 118 (MA-22)			DAT	A SET/RU	N NU	МВЕ	R COI	LATIO	MUS NC	MARY		DATE	7/11	/75		
DATA SET DENTIFIER	CONFIGURATION	1	HD.		T70				RS/VALU	JES			NO. OF RUNS	ļ	АСН ИШМВ	ERS	
RJA330	ØIN84	1	0		T/QA-1	<u>3e</u>	ं ये हा			_	<u> </u>		RUNS	10.3			
331	<u> </u>	A	4	1	95.0	+ 10	·	p°			-	-	-	330			
332	Ø1N79	- - -		<u>-¥</u>	127.7 47.5			 		-	-			331			
333		╢			95.0				_	-	-			332			
334				\downarrow	190.0		 	 	-	-	<u> </u>			333		-	<u></u>
335	ø1N49	+			47.5		 	 				 	-	334			
336		- - -	++	_ <u>2</u> _ T	95.0			 		 	<u> </u>	 		335			
337					190.0			 		-		<u> </u>		336			_
338	Ø1N83		$\dashv \dagger$	3	47.5			<u> </u>				-		337		_	
339		╂┼	╌┠		95.0				-	 -				338			
340		++-	+	-				 	 					339			_
341		H	+	-	190.0			<u> </u>	 -					340			_
342		H +	+		0.0				 					341			
343		┨┼┤	╂		0.0		13	75	-					342			_
344			+	-	47.5	- -			 					343			\Box
345		╂┼┼	┼┟	+	0.0			· .						344			╝
346	_		+	$\downarrow \uparrow$	95.0	+		——			_ <u></u>			345		_	
 	<u>v</u> Ø1N49	V.	$\downarrow \mid$	-	190.0	1 /	$ \downarrow$							346			
	The state of the s		<u> </u>	2	47.5	V								347			
7	13 19	·	25		31		37		43	49		55	6	1	67		75
α OR β		:0 10	ο;Δ 100	<u>√=</u>	2° & ∞ =	FFIG 15	IENT to	s 35°;4	K= 5°	<u></u>)	<u> </u>				-11 IDV	AR (2)	ND

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TEST: CF	HT 118 (MA-22)			DAT	A SET/RU	N NU	MBER CO	LATION	N SUMMARY		DATE	7/11/75			
DATA SET	CONFIGURATION		нD.				PARAMETE	RS/VALÚE	S		NO.	MACH 1	NUMBERS		Ţ-
	Ø1N49	Α	β 0	Uet 2			30E 13.75		-SANGERANGE AND A AND A			348			- Transfer
RJA348 349	<u>V</u>	듬	F	十	190.0		1 7.75					3/19			
350		十	\parallel	-	47.5							350			
351	1	 	<u> </u>		95.0							ا 5ز			
352	V			\downarrow	127.7	_				_	•	352			-
353	Ø1N79			i	47.5							353			
354				T	95.0							354			
355	V			4	190.0							355			١
356	Ø1N79N78			2	47.5							356			-
₹ 357		V	V	2	95.0	4	4					357			
RJA007	Ø1/49 Wing Temp	00	00	T	95.0	00	00					7			
407		∇	1=-		0.0	Ĺ						407			j
008		-10°			95.0							8			
408		卫			0.0							408			
009		20			95.C							9			
409		[]		Ш.	0.0							409		·	
010		35°			95.0							10			
Ý 410	ý	<u> </u>	Ϋ́	4	0.0	Ÿ	<u>V</u>					410	- James and A	אין אוריבישאטאר	
1 7	13 19			25	31		37	43	49	55		61	67		5 7
A.L.P.H.A. IC.	AU, ICN, ICL	<u>M</u>		<u>CBL</u>	- CO	EFFI	CIENTS O	ICL.	, (CD)		3 <u>.4</u>	MACHLE IDVAR II	ITSME IDVAR		~&~ 4 () 1
α OR SCHEDUL	5 / 100	0,	10	Δ =<= O , 2	ε 2 ε σ ζ = 20 ε 35 ο .	15	to 35;	AX= 5°		er dagaageyssan eeras eeras eeras					

+"5" DATA SETS CONTAIN BETA, Q(PSF), PCRCS, T/QA, L/D AS DEPENDENT VARIABLES.

TABLE III. - MODEL DIMENSIONAL DATA

MODEL COMPONENT : BODY - B19		
GENERAL DESCRIPTION : _ Fuselage, Conf:	iguration 3. per	Rockwell
Lines VL70-000139B		
NOTE: Identical to B ₁₇ except forebody	у	
MODEL SCALE: 0.010		
DRAWING NUMBER: VT.70-000139B		
DIMENSIONS:	FULL SCALE	MODEL SCALE
Length , In.	. 1290.3	12.903
Max Width, In.	267.6	2.676
Max Depth , In.	244.5	2.445
Fineness Ratio	4.82175	4.82175
Areæ Ft ₂		
Max. Cross-Sectional	386.67	0.0387
Planform		•
Wetted		
Base		:

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MODEL COMPONENT : BODY FLAP - F5		
GENERAL DESCRIPTION: Configuration	3 per Rockwell	Lines VL70-00013
MODEL SCALE: 0.010		
DRAWING NUMBER: VL70-000139		
DIMENSIONS:	FULL SCALE	MODEL SCALE
Length, In.	84.70	0.847
Max Width, In.	267.6	2,676
Max Depth		
Fineness Ratio	-	
Area - Ft ³		****
Max. Cross-Sectional		
Planform	142.5	0.0143
Wetted		
Base	38,0958	0.0038

B. 在各种的企业的内部的内部,是有特殊的规则是由企业的一种特殊的特殊的。由于自由的实施,是自身的一种基础的一种基础。

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la esta ferilla de la come de la forma en la come de la come de la come de la come en la come de la come de la

	MODEL COMPONENT : CANOPY - C7		
	GENERAL DESCRIPTION: Configuration	3 per Rockwell Lines VL70-000139	
		<u> </u>	2 f
	MODEL SCALE: 0.010		
	DRAWING NUMBER: VI.70-000139		· · .
•			
	DIMENSIONS:	FULL SCALE MODEL SCALE	
	Length ($X_0 = 433$ to $X_0 = 578$), In.	145.0 1.450	
	Max Width		
	Max Depth		
	Fineness Ratio		
	Area		
	Max. Cross-Sectional		
	Planform		
and the second s	Wetted	Variation of the second of the	
27	Base		Provide Walter

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结 医囊性多类性 医克萨特氏试验 医性性医神经性 医乳管 医大量 化铁石油 医二氏性原性性 计对比例 医多种氏病

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MODEL COMPONENT: ELEVON - E23	<u>.</u>	
GENERAL DESCRIPTION: Configuration 3 per W ₁	₉₇ Rockwell Lines	Drawing
VL70-000139B. Data for (1) of (2) sides.	•	
MODEL SCALE: 0.010		
DRAWING NUMBER: VL70-000139B		
DIMENSIONS:	FULL-SCALE	MODEL SCALE
Area - Ft ²	205.52	0.0206
Span (equivalent), In.	353.34	3.533
Inb'd equivalent chord, In.	114.78	1.148
Outb'd equivalent chord, In.	55.00	0.550
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	0.208	0.208
At Outb'd equiv. chord	0.400	0.400
Sweep Back Angles, degrees		
Leading Edge	0.00	0.00
Tailing Edge	_ 10.24	-10.24
Hingeline	0_00	<u> </u>
Area Moment (Normal to hinge line)-Ft ³ (Product of Area and c)	1548.07	_0.Q0155

MODEL COMPONENT:						
GENERAL DESCRIPT	TON:	Configu	ration 3A M	PS nozz	Les.	
		1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -				
MODEL SCALE:	0.010	: · · · ·				
DRAWING NUMBER:						
DIMENSIONS:			•		FULL SCALE	MODEL SCALE
MACH NO.						
Length - In Gimbal I Throat (Point to	Exit Pl Plane	ane			
Diameter - : Exit Throat Inlet			ermente 1918 - Leis		94.000	0.940
Area - ft ² Exit Throat					48.193	0.00482
Gimbal Poin Upper N X Y Z Lower N X Y Z	[ozzle		OT USED		1468.2 53.0 342.7	14.682 + 0.530 - 3.427
Yav Lower 1 Pit	Nozzle tch w Nozzle		not used			
Ү ат	w .	ORIGINA	L PAGE IS			

MODEL COMPONENT: NOZZLE - N31

GENERAL DESCRIPTION: RCS nozzle providing left-hand pitch-down control.

MODEL SCALE: .010

DRAWING NO.:

e diskum sekeri kan sekeri berakan ber	10PEL SCALE
Flight dynamic pressure simulation - PSF	
Cant angle - deg.	
Aft	12
Outboard	20
Diameter - In.	
Exit	.0990
Throat	.0921
Area - In. ²	
Exit	.007698
Throat	
Area ratio	1.13
No. of nezzles	2
"我们的一个大大,我们就是我们的一个大大大大大大大大大大大大大大大大大大大大大大大大大大大大大大大大大大大大	and the second of the second of the

MODEL COMPONENT: NOZZLE - N32

GENERAL DESCRIPTION: RCS nozzle providing right-hand pitch-up control.

MODEL SCALE: .010

DRAWING NO.:

	MODEL SCALE
Flight dynamic pressure simulation - PSF	
Cant angle - deg.	
Aft	_
Outboard	_
Diameter - In.	en e
Exit	
Throat	• *
Area - In. ²	
Exit _{e de la companya de la companya} de la companya de la company	.007698
ty Throat the	.006662
Area ratio	1.15
No. of nozzles	2

MODEL COMPONENT: NOZZLE - N33

GENERAL DESCRIPTION: RCS nozzle to provide left-hand yaw control.

MODEL SCALE: .010

DRAWING NO.:

	MODEL SCALE
Flight dynamic pressure simulation - PSF	
Cant angle - deg.	
Aft	0
Outboard	. 0
Diameter - In.	y finite a grading to provide the CAR. The Carlos and Carlos
Exit	.0990
Throat	.0921
Area - In. ²	
Exit	.007698
Throat	.006662
Area ratio	1.15
No. of nozzles	2

MODEL COMPONENT: NOZZLE - N34

GENERAL DESCRIPTION: RCS nozzle to provide left-hand pitch-down control.

MODEL SCALE: .010

DRAWING NO.:

	MODEL SCALE
Flight dynamic pressure simulation -	PSF
Cant angle - deg.	
Aft	70
Outboard	12
	• • • • • • • • • • • • • • • • • • •
Diameter - In.	
Exit	.0878
Throat	.0520
Area - In. ²	
Exit	
ter in the more of the conservation of the	.006055
Throat	.002124
Area ratio	2.85
No. of nozzles	2

MODEL COMPONENT: NOZZLE - N36

GENERAL DESCRIPTION: RCS nozzle to provide left-hand pitch-up control

MODEL SCALE: .010

DRAWING NO.:

			MODEL SCALE
Flight dynamic press			
Cant angle - deg.			
Aft			0
Outboard			
Diameter - In.			
Exit			.0878
Throat			.0520
Area - In. ²			
Exit			
Throat			.002124
Area ratio	eta a	*	2.85
No. of nozzles	. St. St.		2

MODEL COMPONENT: NOZZLE - N37

GENERAL DESCRIPTION: RCS nozzle to provide left-hand yaw control.

MODEL SCALE: 0.010

DRAWING NO.: He made and the state of the st

	MODEL SCALE
Flight dynamic pressure simulation - PSF	
Cant angle - deg.	
Note that the state of the second sec	0
Outboard	0
Diameter - In.	
in on i <mark>Exit</mark>	
Throat	
Area - In. ²	
Exit	.006055
Throat	.002124
Area ratio	2.85
No. of nozzles	2

MODEL COMPONENT: NOZZLE - N43

GENERAL DESCRIPTION: RCS nozzle to provide left-hand pitch-down control

to simulate entry.

MODEL SCALE: .010

DRAWING NO.:

	MODEL SCALE
Pitalia di Jana de Para de Para	5
Cant angle - deg.	
Aft	
Outboard	20
Diameter - In.	
Exit	
Throat	.0465
Area - In.2	
on the Exit of the first of the contract of the second of the second	.013070
and the Throat when a second second second second second	.001698
Area ratio	7.70
No. of nozzles	

MODEL COMPONENT: NOZZLE - N44

GENERAL DESCRIPTION: RCS nozzle to provide right-hand pitch-up control

to simulate entry.

MODEL SCALE: .010

DRAWING NO.:

	MODEL SCALE
Flight dynamic pressure simulation - PSF	5
Cant angle - deg.	
ing a sign Aft Aggregation of the control of the co	n
Outboard	0
Diameter - In.	
Exit	.129
Throat	.0465
Area - In. ²	
Exit	.013070
Throat	.001698
	7.7
No. of nozzles	2

MODEL COMPONENT: NOZZLE - N47

GENERAL DESCRIPTION: RCS nozzle to provide left-hand pitch-down control

to simulate entry.

MODEL SCALE: .010

DRAWING NO.:

MODEL SCALE
20
12
20
· · · · · · · · · · · ·
.117
.0465
.010751
.001698
6.33
2

MODEL COMPONENT: NOZZLE - N48

GENERAL DESCRIPTION: RCS nozzle to provide right-hand pitch-up control

to simulate entry.

MODEL SCALE: .010

DRAWING NO.:

	MODEL SCALE
Flight dynamic pressure simulation - PSF	
Cant angle - deg.	
Aft	
Outboard	
Diameter - In.	
Exit	
Throat	.0465
Area - In.2	and the second
Exit	.010751
Throat Asia, and a massaus and asia succession	.001698
Area ratio	6.33
No. of nozzles	2

MODEL COMPONENT: NOZZLE - N49

GENERAL DESCRIPTION: RCS Nozzle providing left-hand pitch-down control

to simulate return to launch site (RTLS)

MODEL SCALE: 0.010

DIMENSIONS:	MODEL SCALE
Flight dynamic pressure simulation - PSF	20
Cant Angle - deg.	
Aft	12
Outboard	20
Diameter - In.	
Exit with the second of the se	0.141
Throat	0.0670
Area - In. ²	
Exit	0.015614
Throat	0.003525
Area Ratio	4.430
No. of nozzles	2

MODEL COMPONENT: NOZZLE - N₅₀

GENERAL DESCRIPTION: RCS nozzle providing righthand pitch-down control to simulate return to launch site (RTLS).

MODEL SCALE: 0.010

DIM	ensions:	MODEL SCALE
	Flight dynamic pressure simulation - PSF	20
	Cant angle - deg.	
	Aft	12
	Outboard	20
	Diameter - In.	0.141
	Exit	0.151
	Throat	0.0670
	Area - In. ²	
• .	Exit	0.015614
	Throat	0.003525
	Area ratio	4.430
	No. of nozzles	2

MODEL COMPONENT: NOZZLE - N51

CHENERAL DESCRIPTION: RCS nozzle providing left-hand yaw control to simulate return to law. " site (RTLS).

MODEL SCALE: 0.010

DIMENSIONS:	MODEL SCALE
Flight dynamic pressure simulation - PSF	20
Cant angle - Deg.	
Aft	
Outboard	0
Diameter - In.	
Exit	0.141
Throat	0.0670
Area - In. ²	
Exit	0.015614
Throat	0.003525
Area ratio	4.430
No. of nozzles	- (

MODEL COMPONENT: NOZZLE - N₅₂

GENERAL DESCRIPTION: RCS nozzle providing right-hand pitch-up control to simulate return to launch site (RTLS).

MODEL SCALE: 0.010

DIMENSIONS: MOD	EL SCALE
Flight dynamic pressure simulation - PSF	20
Cant angle - deg.	
Art.	0
Outboard	0
Diameter - In.	
land the Exit	0.141
Throat	0.0670
Area – $In.^2$	
Exit	0.015614
Throat	0.003525
Area ratio	4.430
No. of nozzles	2

MODEL COMPONENT: NOZZLE - N67

GENERAL DESCRIPTION: RCS nozzle to provide left-hand yaw control to

simulate entry.

MODEL SCALE: .010

DRAWING NO.:

and the property of the control of the property of the property of the control of	MODEL SCALE
Flight dynamic pressure simulation - PSF	5
Cant angle - deg.	
Aft :	0
Outboard	0
Diameter - In.	
Exit	.129
Throat	.0465
Area - In. ²	
o estados de la composición de la comp La composición de la	.013070
Throat	.001698
Area ratio	7.70
No. of nozzles	2

MODEL COMPONENT: NOZZLE - N78

GENERAL DESCRIPTION: RCS nozzle providing right-hand up-firing

control to simulate return to launch site (RTLS).

MODEL SCALE: 0.010

DRAWING NO.: SS-A01160

DIMENSIONS:	MODEL SCALE:
Flight dynamic pressure simulation - PS	F 20
Cant angle - deg.	ere retationed records. Money to prefer to be a co
Aft	0
Outboard	
Diameter - In.	
Exit	
Throat	0.0670
Area - In. ²	
Exit	0.015614
Throat	0.003525
Area ratio	4.430
No. of nozzles	and the second s

MODEL COMPONENT: NOZZLE - N79

GENERAL DESCRIPTION: RCS nozzle providing left-hand pitch-down control to simulate return to launch site (RTLS).

MODEL SCALE: 0.010

DRAWING NO.:

DIMENSIONS: MO	DEL SCALE
Flight dynamic pressure simulation - PSF	20
Cant angle - deg.	
Aft	12
Outboard	20
Diameter - In.	
e Berger (Exit) e e e e e e e e e e e e e e e e e e	0.141
Throat	0.0670
Area - In. ²	in in the total of the second
Exit	0.015615
Throat	0.003525
Area ratio	4.430
No. of nozzles	1

MODEL COMPONENT: NOZZLE - N81

GENERAL DESCRIPTION: RCS nozzle providing left-hand pitch-up control to simulate return to launch site (RTLS).

MODEL SCALE: 0.010

DRAWING NO.:

IMENSIONS:		MODEL SCALE
Flight dynamic pr	ressure simulation - PSF	20
Cant angle - Deg.		
Aft		0
Outboard		0
Diameter - In.		
Exit	en an en en de de en esta en el de en	0.141
Throat		0.0670
Area - In. ²		
Exit		0.015614
Throat	en e	0.003525
Area ratio		4.430
No. of nozzles	en de la caractería de la composição de la Composição de la composição de la composiç	2

MODEL COMPONENT: NOZZLE - N82

MODEL DESCRIPTION: RCS nozzle providing right-hand pith-up control

to simulate return to launch site (RTLS).

MODEL SCALE: 0.010

DIMENSIONS:	MODEL SCALE
Flight dynamic pressure simulation - PSF	20
Cant angle - deg.	
.Aft	0
Outboard	0
Diameter - In.	
Exit	0.141
Throat	0.0670
Area - In.2	
Exit	0.015614
Throat	0.003525
Area ratio	4.430
No. of nozzles	3

MODEL COMPONENT: NOZZLE - N83

GENERAL DESCRIPTION: RCS nozzle providing left-hand pitch-down control

to simulate return to launch site (RTLS).

MODEL SCALE: 0.010

DRAWING NO.:

DIMENSIONS:	MODEL SCALE
Flight dynamic pressure simulation - P	SF 20
Cant angle - deg.	
Aft	12
Outboard	20
Diameter - In.	
Exit	0.141
Throat	0.0670
Area - In. ²	
Exit	0.015614
Throat	0.003525
Area ratio	4.430
No. of nozzles	3

MODEL COMPONENT: NOZZLE - N84

GENERAL DESCRIPTION: RCS nozzle providing right-hand pitch-up control to simulate return to launch site (RTLS).

MODEL SCALE: 0.010

DRAWING NO.:

DIMENSIONS:		MODEL SCALE.
Flight	dynamic pressure simulation - PSF	20
Cant a	ingle - deg.	
1		0
	Outboard	0
Diamet	er – In:	
14.5 4.1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	xit	0.141
	lhroat	0.0670
Area -	In.2	
I	lxit	0.015614
•	Chroat	0.003525
Area	atio	4.430
No. o	'nozzles	2

MODEL COMPONENT: NOZZLE - N85

GENERAL DESCRIPTION: RCS nozzle providing left-hand side-firing to simulate return to launch site (RTLS).

MODEL SCALE: 0.010

DIMENSIONS: MOD	EL SCALE
Flight dynamic pressure simulation - PSF	20
Cant angle - deg.	
e de la companya de La companya de la co	0
Outboard	0
Diameter - In.	
Exit	0.141
Throat	0.0670
Area - In. ²	
Exit	0.015614
Throat	0.003525
Area ratio	4.430
No. of nozzles	2

MODEL COMPONENT : OKS POD - MC		· · · · · · · · · · · · · · · · · · ·	
GENERAL DESCRIPTION : Basic configura	tion 3A OMS po	ods with non-	
metric RCS engine housing and nozzles.	Same geometry	as M ₂	
MODEL SCALE: 0.010			
DRAWING NUMBER: VL70-000139B			
DIMENSIONS:	FULL SCALE	MODEL SCALE	
Length	346.0	3.460	
Max Width	108,0		
Max Depth	113.0	1.130	
Fineness Ratio			
Area Max. Cross—Sectional			
Planform			ann eigen an Airt Georgean
Wetted Commence of the Commenc			
Base in the second of the second			
Station of aft end of RCS nozzle block	1560	15.60	

and the first term of the first of the first of the state of the first of the first of the state of the state

MODEL COMPONENT: RUDDER - R5	•	
GENERAL DESCRIPTION: Configuration 140C or	biter rudder (ide	ntical to
configuration 140A/B rudder)		
		<u> </u>
MODEL SCALE: 0.010		
DRAWING NUMBER: VL70-000146B, -000095		
en de Marie de La Carlo de La carlo de Carlo de La Ca		•
DIMENSIONS:	FULL-SCALE	MODEL SCALE
Area - Ft ²	100.15	0.0100
Span (equivalent), In.	201.00	2.010
Inb'd equivalent chord , In.	91.585	0.916
Outb'd equivalent chord, In.	50.833	0.508
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	0.400	0.400
At Outb'd equiv. chord	0.400	0.400
Sweep Back Angles, degrees		
Leading Edge	the state of the s	
Tailing Edge	26.25	26.25
Hingeline (Product of Area & c)	34.83	34.83
Area Moment (Normal to hinge line)Ft3	610.92	0.000610
Mean Aerodynamic Chord, In.	73.2	0.732

我实际 医海里氏病 化二氯酚 医山黄油硷 医大型二氢甲基 医电路管 化自量压力 化铁

MODEL COMPONENT: VERTICAL - V7	· ·	•
GENERAL DESCRIPTION: Centerline vertical tail.	doublewedge	rirfoil
with rounded leading edge.		
MOTE: Same as V ₅ , but with manipulator housing r	emoved.	
MODEL SCALE: 0.010		
DRAWING NUMBER: VL70-000139		
DIMENSIONS:	FULL SCALE	MODEL SCALE
TOTAL DATA		
Area (Theo) - Ft ²		
Planform	425.92	0.0426
Span (Theo) - In.	315.72	<u>3.157</u>
Aspect Ratio	1.675	1.675
Rate of Taper	0.507	0.507
Taper Ratio	0.404	0.404
Sweep-Back Angles, Degrees.		
Leading Edge	45.00	45.000
Trailing Edge	26.249	26.249
0.25 Element Line	41.130	41.130
		<u> </u>
Chords:	•	
Root (Theo) WP	268.50	2.685
Tip (Theo) WP	108.47	1.085
MAC	199.81	1.998
Fus. Sta. of .25 MAC	1463.50	14.635
W.P. of .25 MAC	635,522	6.355
B.L. of .25 MAC	0.00	0.00
D.D. 01 .2) PAO	0.00	
Airfoil Section		
Leading Wedge Angle - Deg.	10.00	10.00
Trailing Wedge Angle - Deg.		
Leading Edge Radius	14.920	14.920
reading page vaning	2.0	0.020
Void Area	13.17	0.0013
Blanketed Area	0.00	0.00

MODEL COMPONENT: WING-WING SENERAL DESCRIPTION: Configuration 3 per Rockwell	Lines VL70-00013	39B
NOTE: Same as W ₁₀₇ , except guff, airfoil and		-
TEST YO.	DWG. NO. VL	70-000139B
DIMENSIONS:	FULL-SCALE	MODEL SCALE
TOTAL DATA		
Area (. neo.) Ft ²	0(00.00	26.900
Planform .	2690.00 936.68	9.367
Span (Theo In.	2.265	2,265
Aspect Ratio Rate of Taper	$\frac{2.203}{1.177}$	1.177
Taper Ratio	0.200	0.200
Dihedral Angle, degrees	3.500	3.500
Incidence Angle, degrees	Ö. 500	0.500
Aerodynamic Twist, degrees	+3.000	+ 3.000
Sweep Back Angles, degrees	<u> </u>	
Leading Edge	45.000	45.000
Trailing Edge	<u> </u>	-10.24
0.25 Element Line	35,209	35.209
Chords:	1 a a a a	6 800
Root (Theo) B.P.O.O.	689.24	6.892
Tip, (Theo) B.P.	137.85	1.379
MAC	<u>474.81</u>	11.369
Fus. Sta. of .25 MAC	1136.89 290.857	2.909
(Z _o)* W.P. of .25 MAC	182.13	1.821
(Yo) * B.L. of .25 MAC	104.13	
Area (Theo) Ft ²	3,000,00	17.523
Area (Theo) Ft	1752.29 720.68	7.207
Span. (Theo) In. BP108	2.058	2.058
Aspect Ratio	0.2/.5	0.245
Taper Ratio		
Chords Root BP108	562.40	5.624
Tip 1.00 <u>b</u>	137.85	1.379
े रि		3.930
MAC	393.03	11.853
Fus. Sta. of .25 MAC	1185.31 293.653	2.937
*W.P. of .25 MAC	251.76	2.518
B.L. of .25 MAC Airfoil Section (Rockwell Mod NASA)		
XXXX-64		
Root b *	0.100	0.100
2		
Tip 5 =	0.120	0.120
~		
Data for (!) of (2) Sides		
Leading Edge Cuff_2	116.333	1.183
Planform Area Str	500.00	5.000
Leading Edge Intersects Fus M. L. 0 Sta Leading Edge Intersects Wing @ Sta	1083.4	10.834
TSSOING Edde turklastes mind a sec	1403.4	

Nozzle	Throat Dia.	Exit Dia.	Lip Angle	Туре		No. of Jets	Cant
ГЕИ	0.0921	0.0990	5°	LH down firing		2	20°OUTBD,12°AFT
N32	0.0921	0.0990	5°	RH up firing	: :	2	None
N33	0.0921	0.0990	5°	LH side firing		2	None
N34	0.0520	0.0878	go	LH down firing		2	20°OUTBD,12°AFT
N36	0.0520	0.0878	9°	RH up firing		2	None
N37	0.0520	0.0878	9°	LH side firing		2	None
N43	0.0465	0.129	31°45'	LH down firing		2	20°OUTBD,12°AFT
N44	0.0465	0.129	31°45'	RH up firing		2	None
N47	0.0465	0.117	34°30'	LH down firing		2	20°OUTBD,12°AFT
N48	0.0465	0.117	34°30'	RH up firing		2	None
N49	0.0670	0.1413	34°15'	LH down firing		2	20°0UTBD,12°AFT
N5 0	0.0670	0.1413	34°15'	RH down firing		2	20°OUTBD,12°AFT
N51	0.0670	0.1413	34°15'	LH side firing		4	None
N52	0.0670	0.1413	34°15′	RH up firing		2	None
N67	0.0465	0.129	31°45'	LH side firing		2	None
N78	0.0670	0.1413	34°15'	RH up firing		1	None

TABLE IV. - Concluded

Nozzle	Throat Dia.	Exit Dia.	Lip Angle	Туре		No. of Jets	Cant
N79	0.0670	0.1413	34°15'	LH down firing		1	20°0UTBD,12°AFT
N81	0.0670	0.1413	34°75'	LH up firing		2	None
N82	0.0670	0.1413	34°15'	RH up firing		3	None
N83	0.0670	0.1413	34°151	LH down firing		. 3	20°0UTBD,12°AFT
N84	0.0670	0.1413	34°15'	Combination-RH up firing & side firi	ng	2 up 2 side	None
N8E	0.0670	0.1413	34°15'	LH side firing		2	None

TABLE V. - SIMULATION PARAMETERS

q_{∞} = 20 PSF RTLS abort separation simulation

Α.	Free Stream Conditions	Free Flight	Wind Tunnel
	Dynamic Pressure q Mach number M *Reynolds No. RN/L Altitude h	20 psf 7 1.23x10 ⁶ 200,000ft	150 psf 10.3 1x10 ⁶
B .	RCS Jet Characteristics	Prototype	Model .
	Chamber Pressure PC Chamber Temp. TC Specific Heat Ratio YC Expansion Ratio e Nozzle Angle OC Exit Area Ae Exit Mach No. Mj Exit Pressure Pj Mass Flow Rate Momentum MjUj Thrust TjUj	150 r.ia 5450 °R 1.232 20 3° 72.382 in ² 3.93 0.643 psi 3.287 1bm/sec 903.46 1bF 950 1bF	140 psi 520 °R 1.4 4.792 34°15' 0.01567 in ² 3.13 3.136 psi 0.01067 lbm/sec 0.675 lbs. .712 lbs.
C.	Jet to Free Stream Parameters (Sref = 1 ft ²)	Full Scale Free Flight	<u>Simulation</u>
	Thrust <u>T</u> Ratio q Sref	47.5	47.5 (Matched)
·	Mass Flow m_j Ratio p U Sref	26.4	50.6
	Momentum M _j U _j Ratio q Sref	45.17	45 (Matched)
	Pressure Pj Ratio P	224 - A. Chen D. A. Chen D. A. Chen D.	224 (Matched)
	Plume Shape	Boundary up to Impact station	(Roughly Matched)

^{*} Reynolds Number based on Orbiter length & orb = 107.5 ft.

TABLE VI. - THRUST COEFFICIENT FACTORS

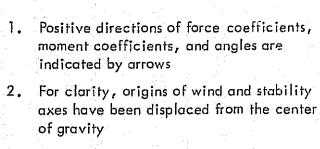
energia (j. 1865.) 1888 - Maria Barrier, de la Santa (j. 1865.)		$k_i = T/P_c$
<mark>Jet</mark>	<u>Gas</u>	<u>lbs/psia</u>
N31 (1997) (1997)	Air	0.00692
N32	Air	0.00738
N33	Air of the state o	0.00792
1 N34, 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Air	0.00266
1. N36 (1.1. 1.1. 1.1. 1.2. 1.2. 1.2. 1.2. 1.2	Air is a second second	0.00261
N37	Air to the state of the state o	0.00300
N43	Air	0.00250
M44	Air	0.00245
V N47 2 3 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Atreese	0.00237
N48	Air	0.00237
N49	Air is a second of the second	0.00920
N50	Äir e	0.00824
N51	Air	0.01620
N52	Air	0.00920
N61	Air	0.00221
N78	Air	0.00450
N79	Air	0.00460
N81	Air	0.00900
N82	Air	0.01356
N83	Air	0.01356
N84	Air	0.00886
N85	Air	0.00904

<u>Data Point</u>	$\alpha = 0$	$\alpha = -10$	$\alpha = 20$	$\alpha = 35$	<u>Jet</u>
1	221	295	181	189	ON
2	290	326	208	219	OFF
3	308	344	235	246	ON
4	327	362	264	273	OFF
5	342	375	289	291	ON
6	356	388	313	314	OFF
7	368	398	329	333	ON
. 8	378	408	343	353	OFF
9	386	417	359	369	ON
10	396	425	374	386	0FF
17	404	434	387	406	ON
12	412	443	397	417	OFF
13	418	450	405	429	ON
Jan 14 (1976)	425	459	414	442	OFF
15	432	465	423	451	ON
16	438	472	431	463	0FF

TABLE VII. - Concluded.

<u>Data Point</u>	$\alpha = 0$	$\alpha = -10$	$\alpha = 20$	$\alpha = 35$	<u>Jet</u>
17	444	480	439	471	ON
18	450	488	446	479	OFF
19	454	495	451	489	ON
20	460	501	457	497	OFF
21	464		462	504	ON
22	469		467		OFF
23	473				ON
24	478				OFF

^{*} degrees Fahrenheit



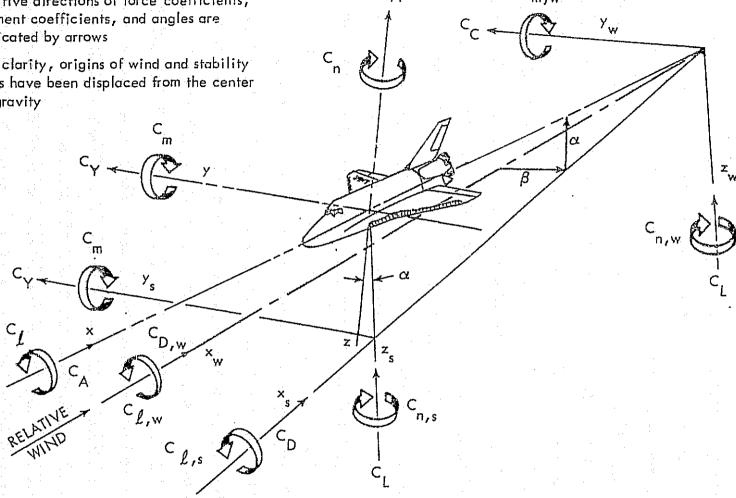
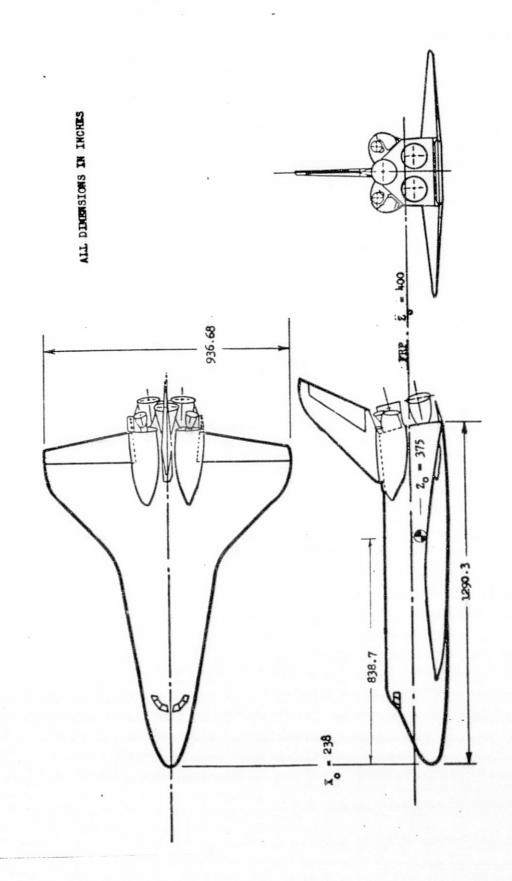
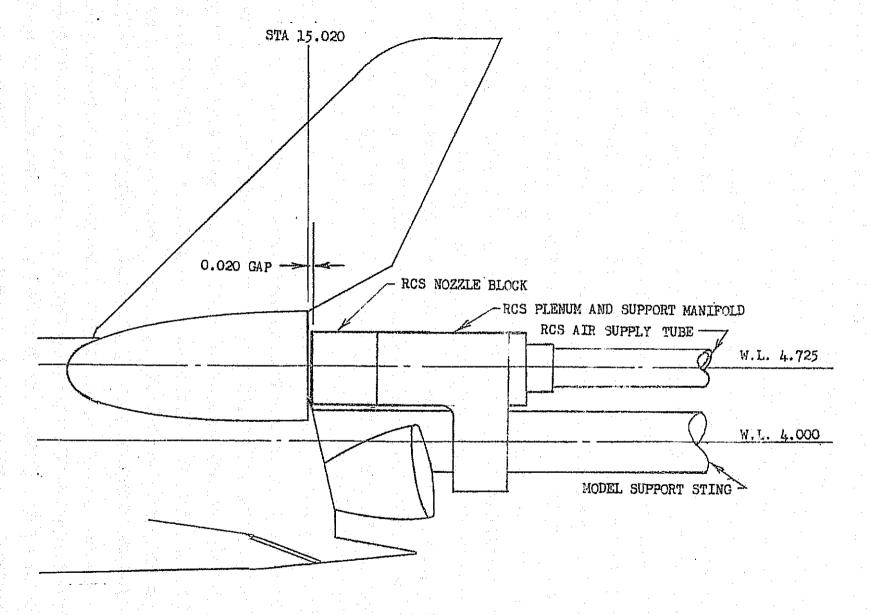


Figure 1. - Axis systems.

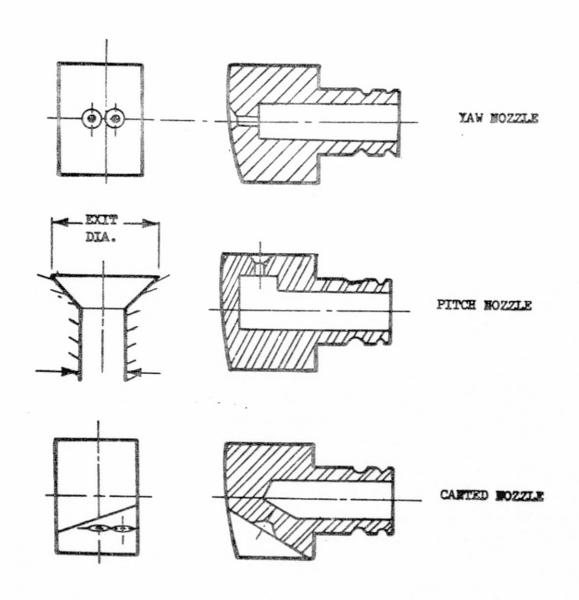


a. Orbiter Configuration Figure 2. - Model sketches.

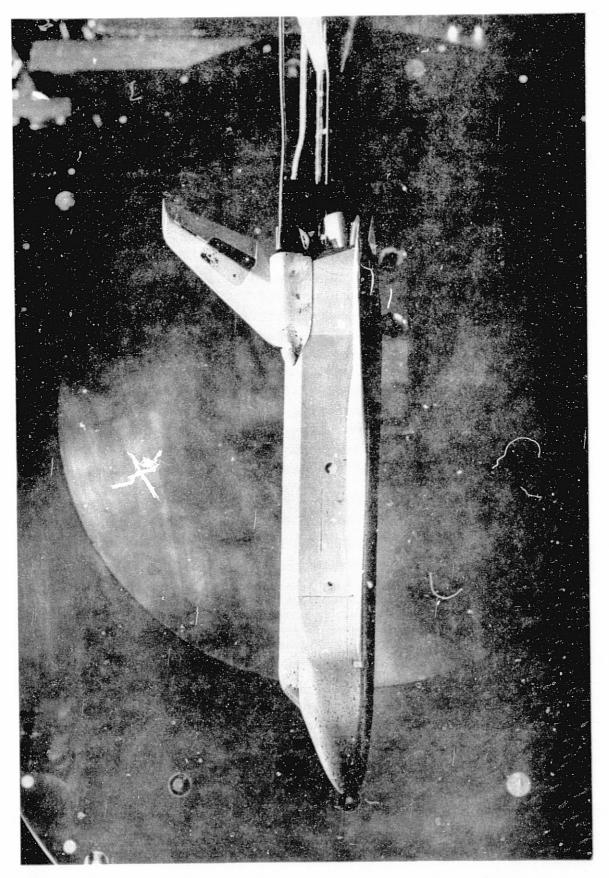


b. RCS Plenum Nozzle Block InstallationFigure 2. - Continued.

Figure 2.- Continued. c. RCS Nozzle Adapter

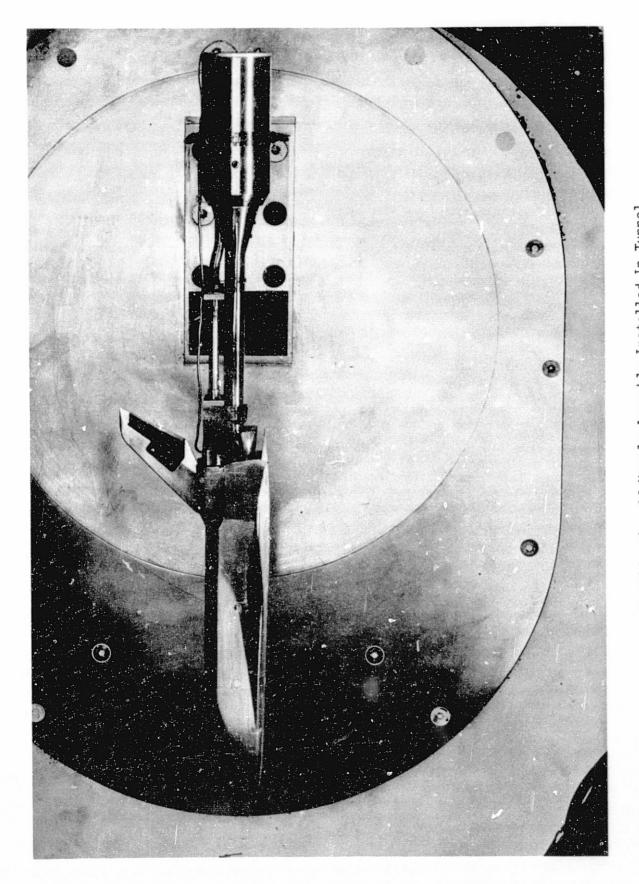


d. Model Nozzle Block Configurations
 Figure 2. - Concluded.



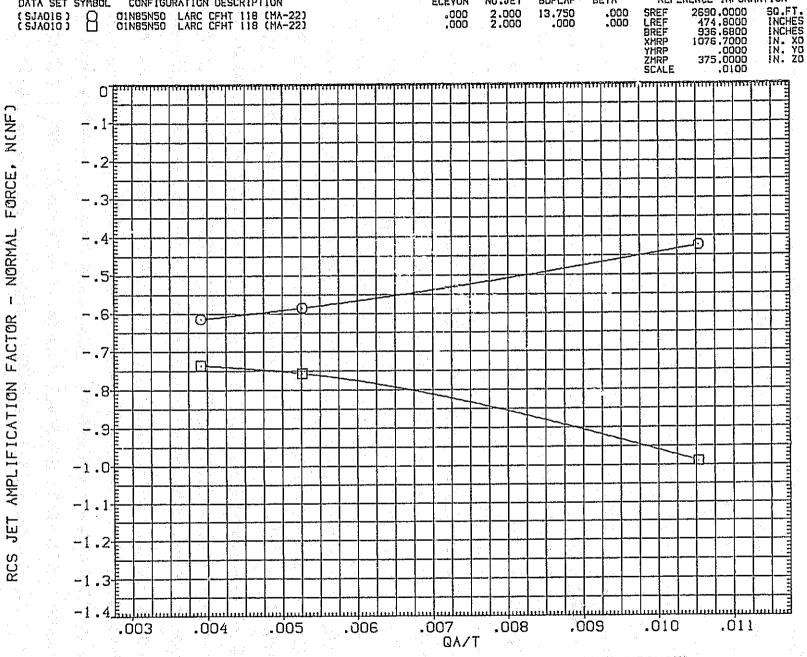
a. Orbiter Installation Side View Figure 3. - Model photographs.

ORIGINAL' PAGE IS
OF POOR QUALITY



b. Side View Of Nozzle Assembly Installed In Tunnel Figure 3. - Concluded.

DATA FIGURES



BETA

BOFLAP

ELEYON

DATA SET SYMBOL CONFIGURATION DESCRIPTION

NO.JET

REFERENCE INFORMATION

FIGURE 44. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N50N85 PAGE (A)ALPHA = -8.00

CONFIGURATION DESCRIPTION

.004

.003

.005

FIGURE 44. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N50N85 718 PAGE (B)ALPHA =

.006

.007

QA/T

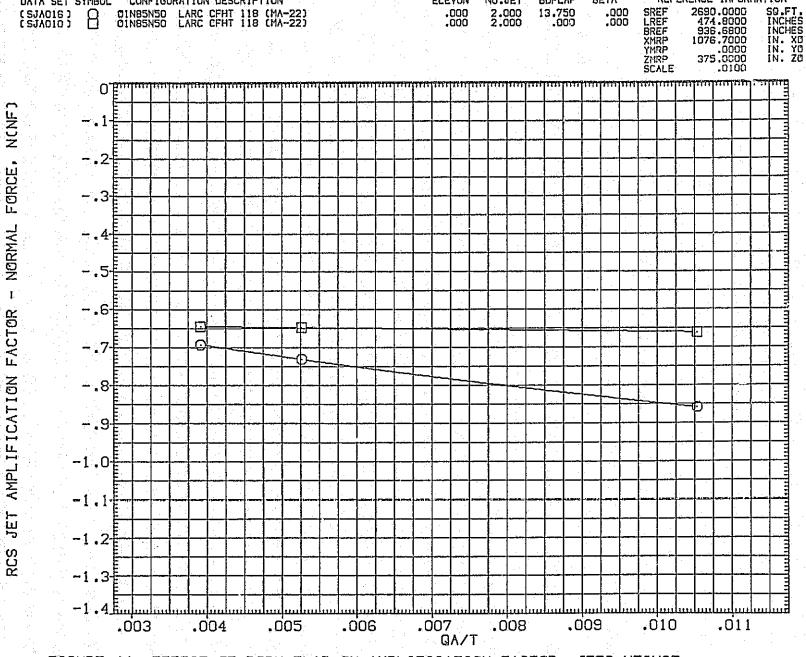
.008

.009

.011

.010

REFERENCE INFORMATION



ELEYON

NO.JET.

DATA SET SYMBOL CONFIGURATION DESCRIPTION

REFERENCE INFORMATION

719

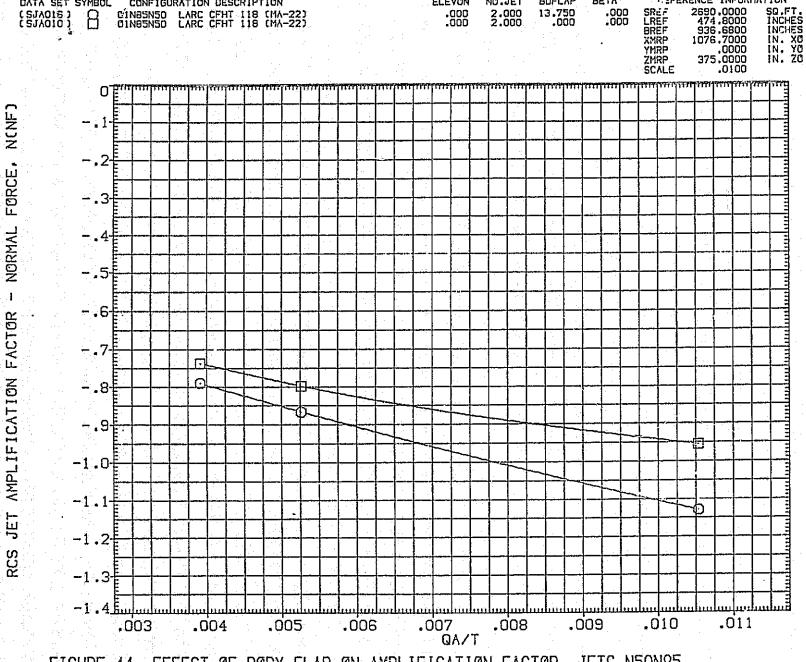
BETA

BDFLAP

FIGURE 44. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N50N85

CC)ALPHA = 10,00

PAGE



DATA SET SYMBOL

CONFIGURATION DESCRIPTION

DIFFERENCE INFORMATION

BOFLAP

ELEVON

NO.JET

FIGURE 44. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N50N85 720 PAGE CDJALPHA = 20.00

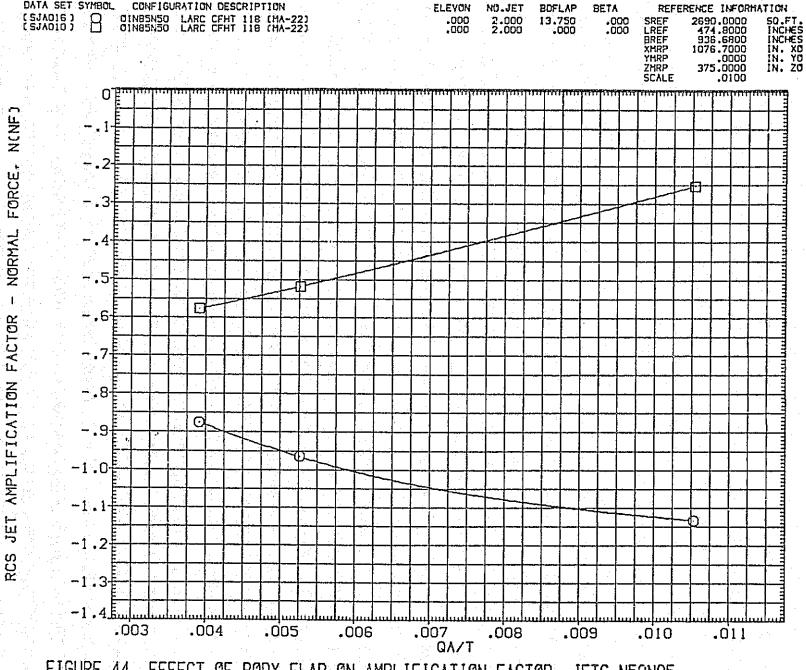


FIGURE 44. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N50N85 (E)ALPHA = 35.00

PAGE

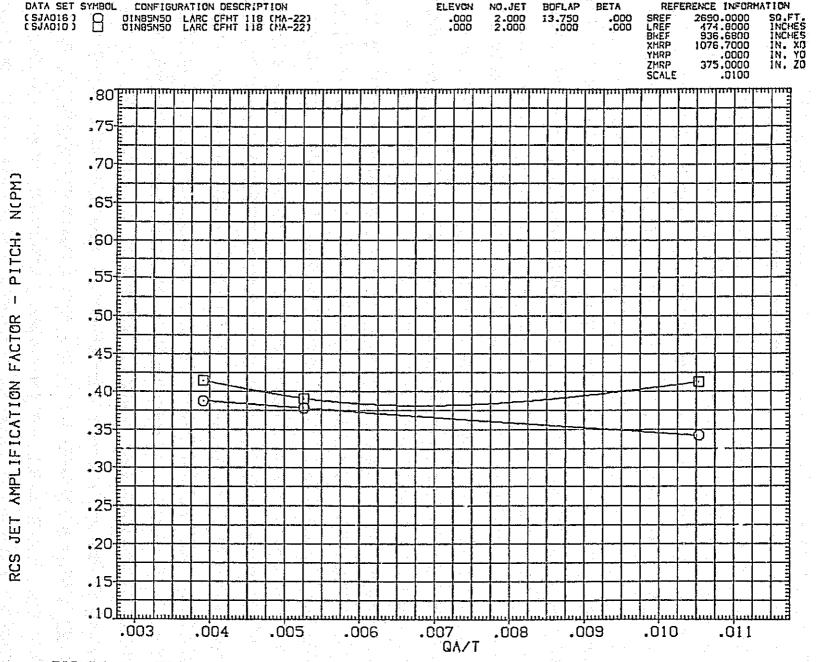
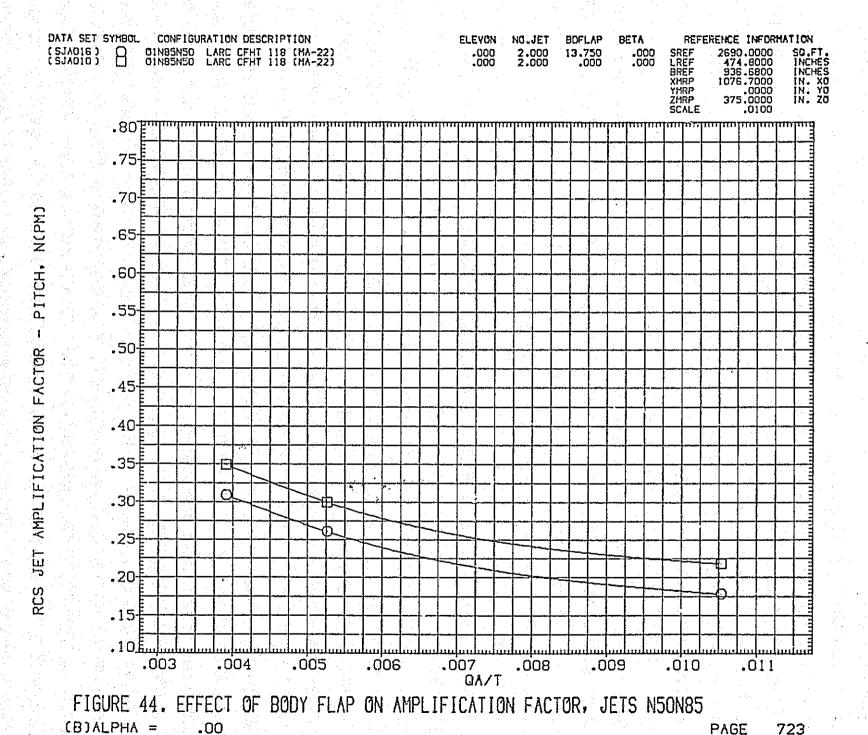


FIGURE 44. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N50N85

(A)ALPHA = -8.00

PAGE 722



NCPM)

PITCH,

FACTOR

JET AMPLIFICATION

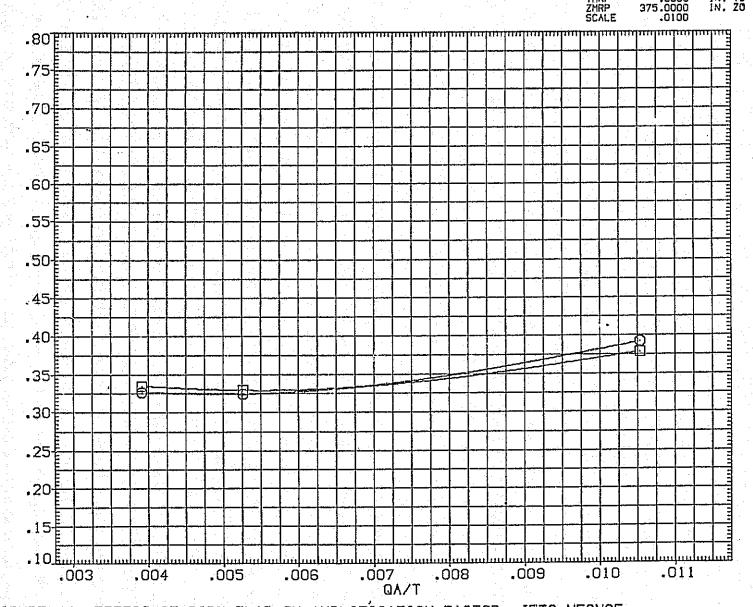


FIGURE 44. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N50N85

COALPHA = 10.00

PAGE 724

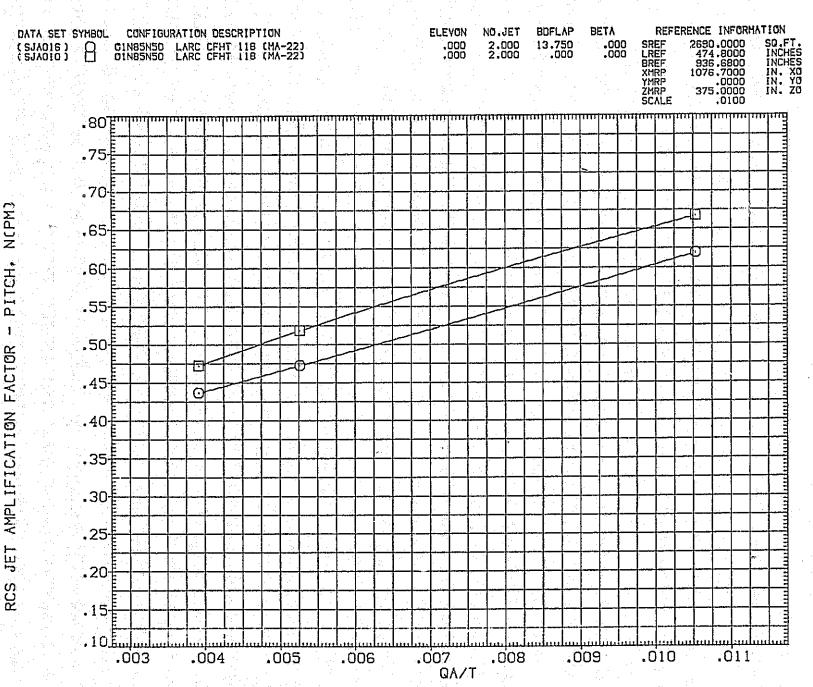


FIGURE 44. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N50N85

CD) ALPHA = 20.00

PAGE

N(PM)

FACTOR

AMPLIFICATION

JET

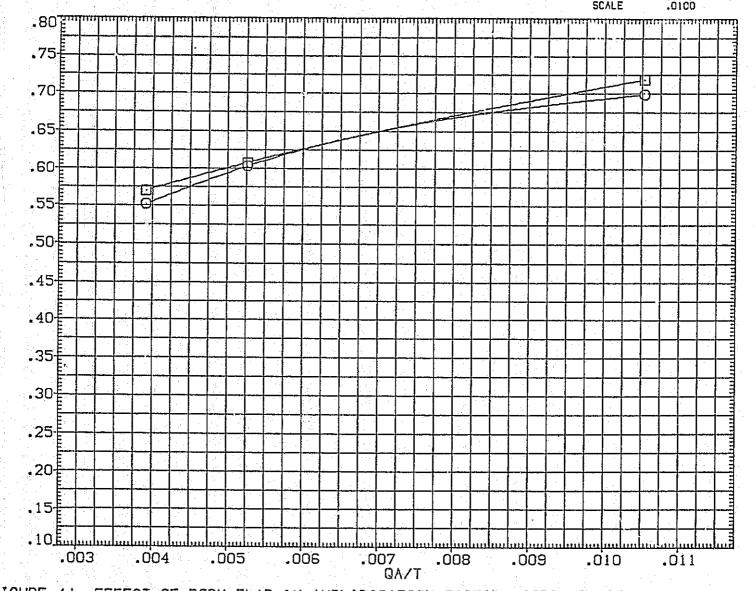


FIGURE 44. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS NSON85

(E)ALPHA = 35.00

PAGE 726

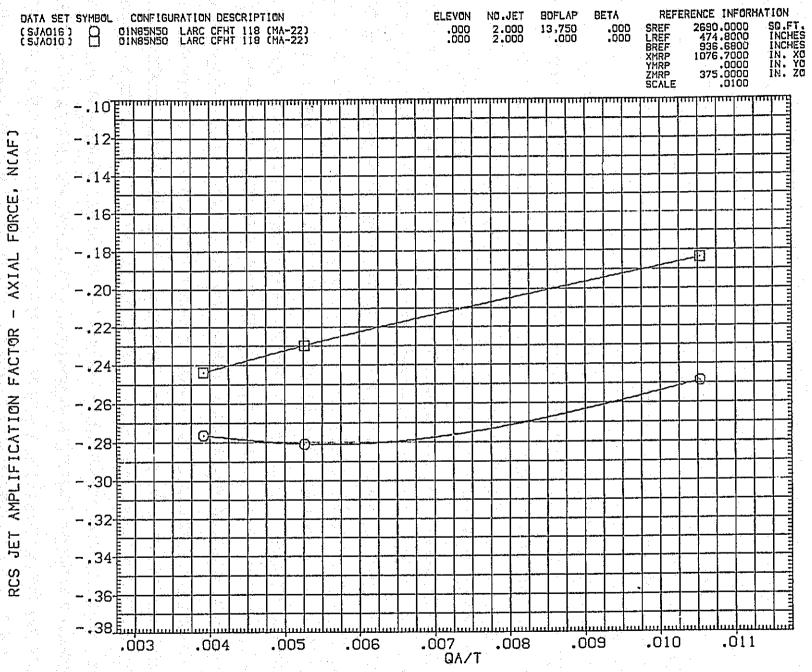


FIGURE 44. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N50N85

(A)ALPHA = -8.00

PAGE

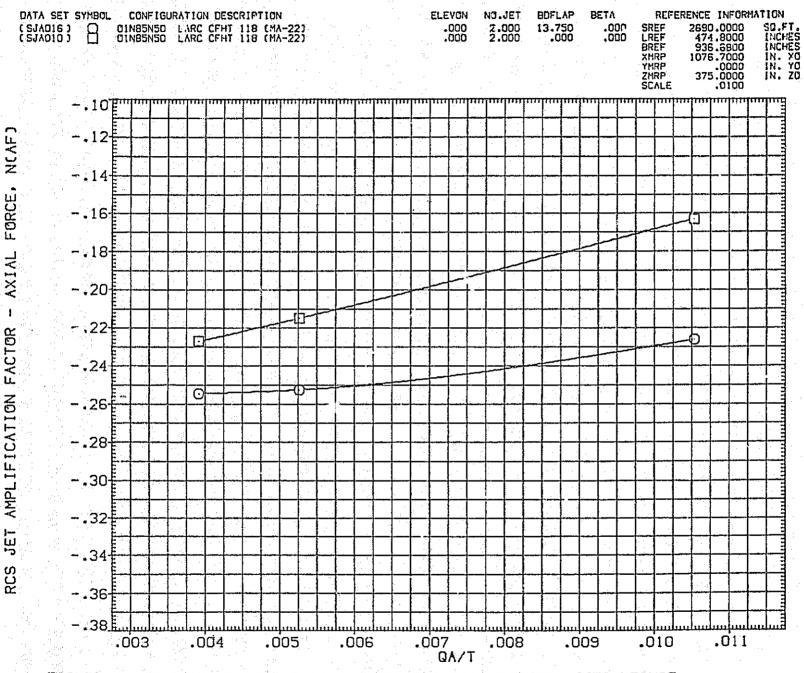


FIGURE 44. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N50N85

(B)ALPHA = .00

PAGE 728

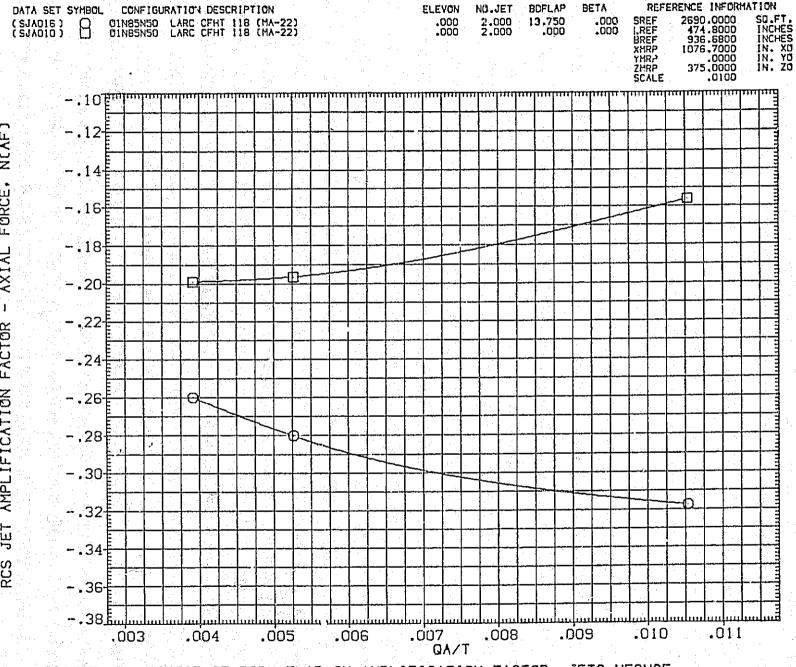


FIGURE 44. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N50N85

PAGE

730 PAGE (D)ALPHA = 20.00

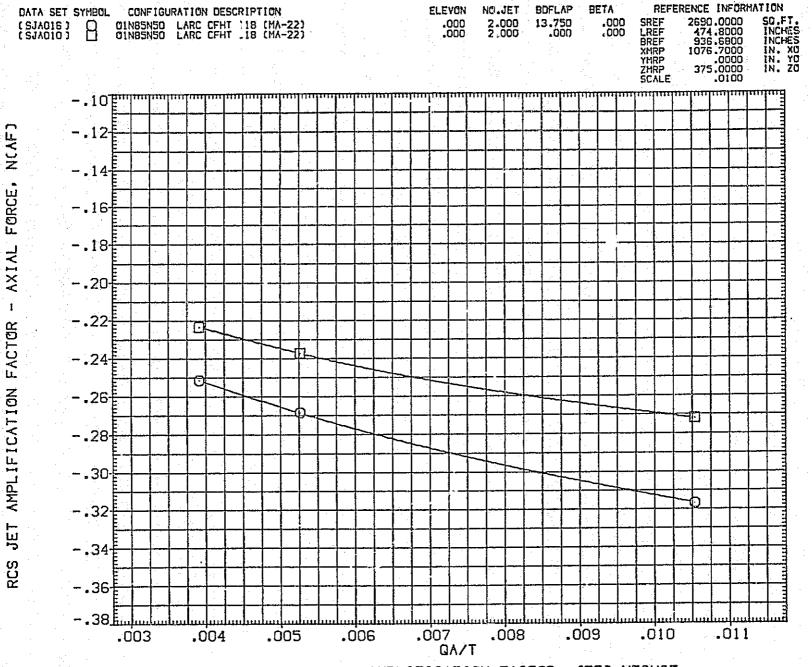
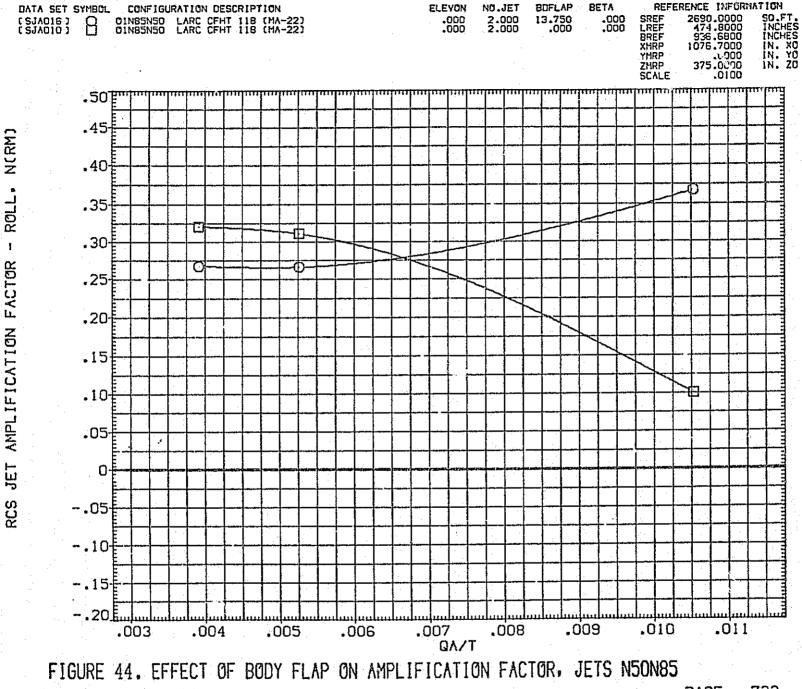


FIGURE 44. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N50N85

(E)ALPHA = 35.00

PAGE 731



732 PAGE (A)ALPHA = -8.00

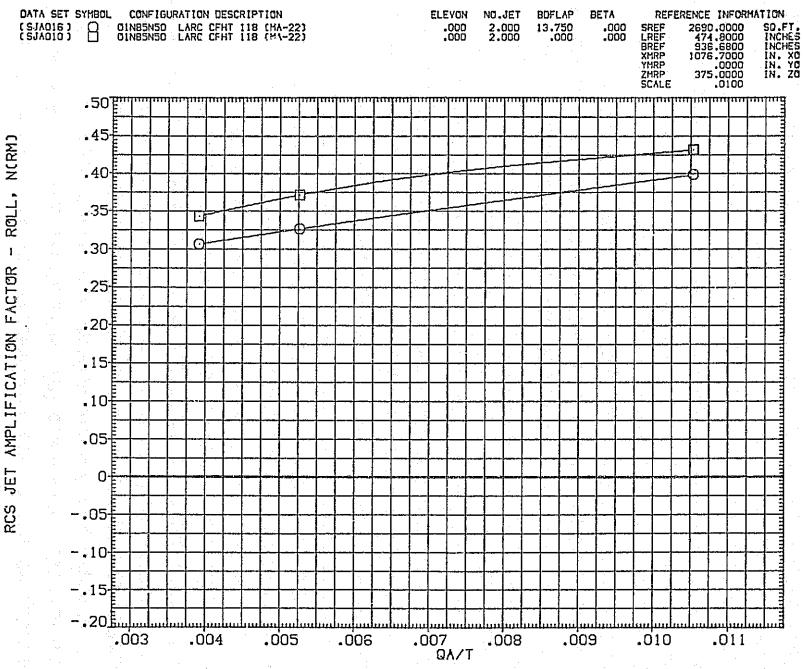
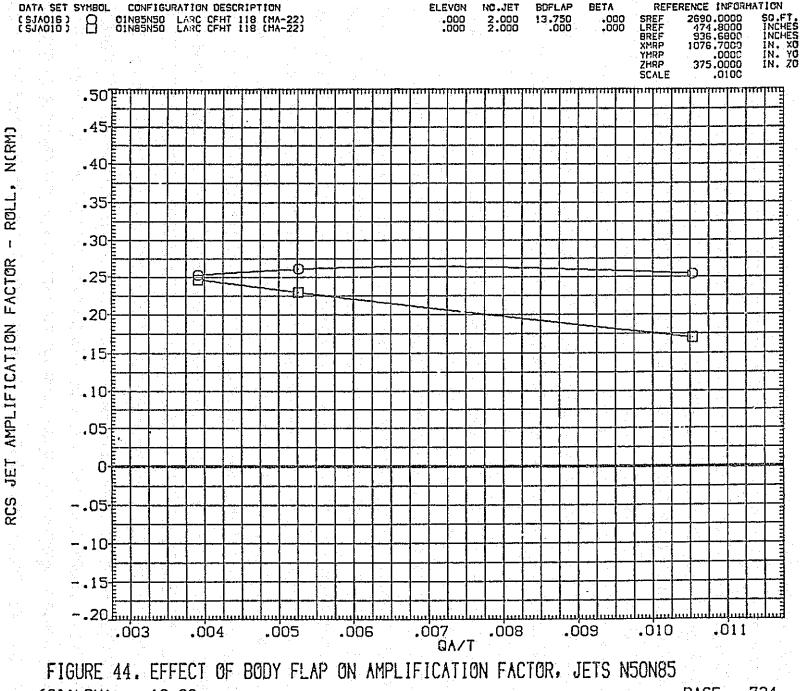


FIGURE 44. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N50N85

(B) ALPHA = .00

PAGE



(C)ALPHA = 10.00PAGE 734

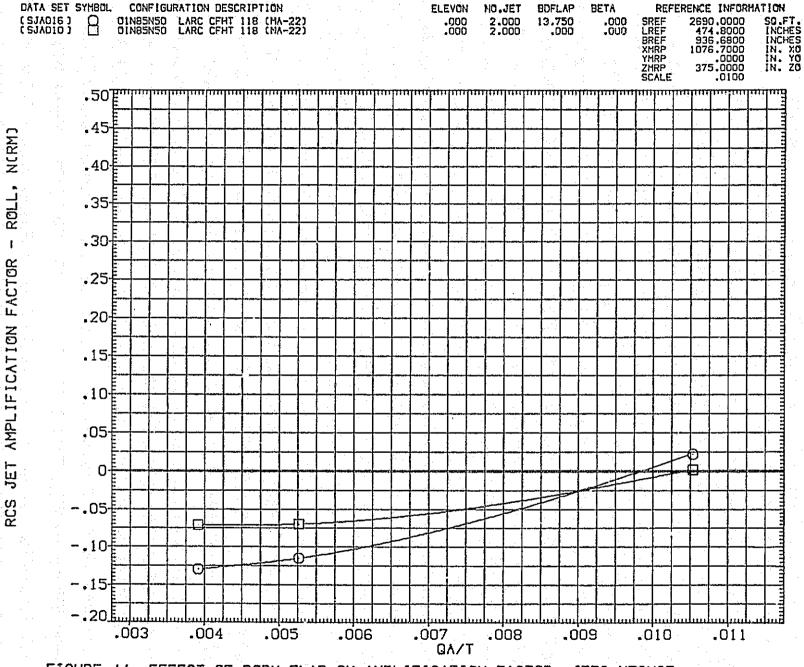


FIGURE 44. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N50N85

PAGE

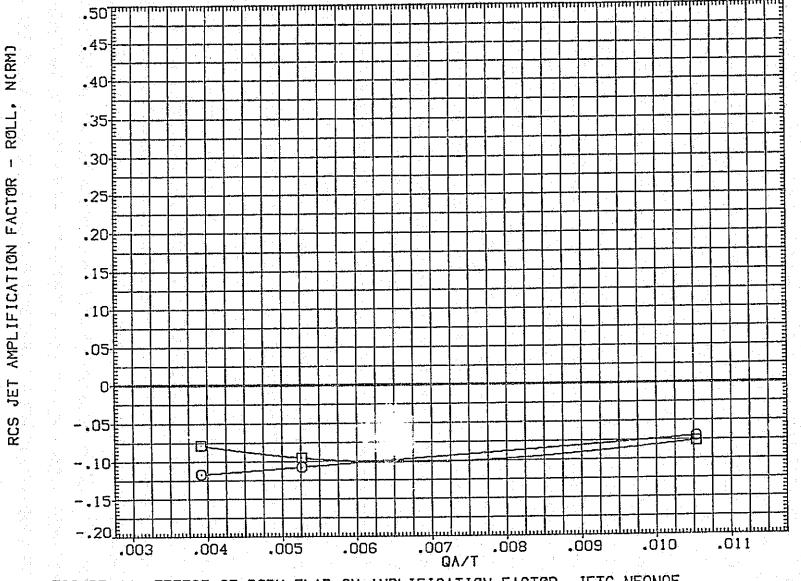


FIGURE 44. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N50N85

(E)ALPHA = 35.00

PAGE 736

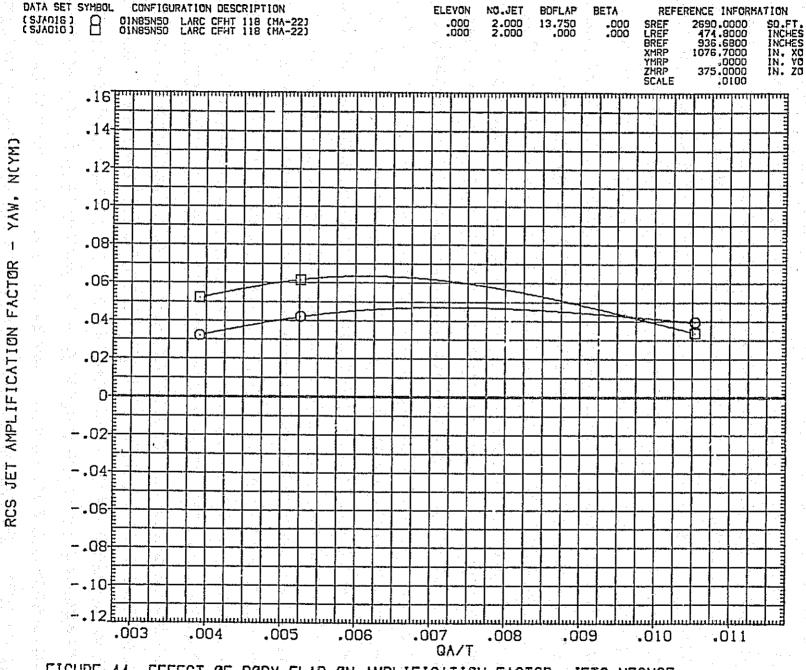


FIGURE 44. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N50N85

(A)ALPHA = -8.00

PAGE

FIGURE 44. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N50N85

(B)ALPHA = .00

PAGE 738

QA/T

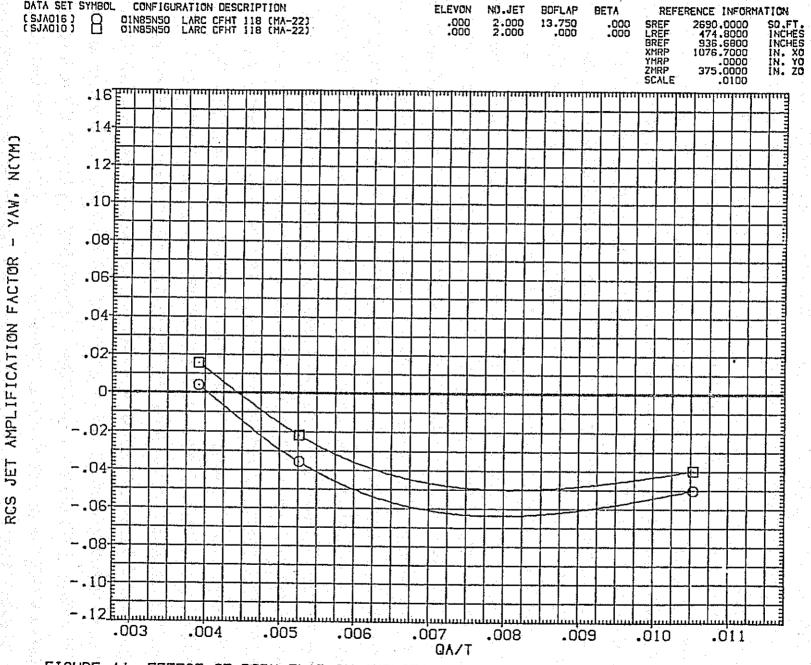
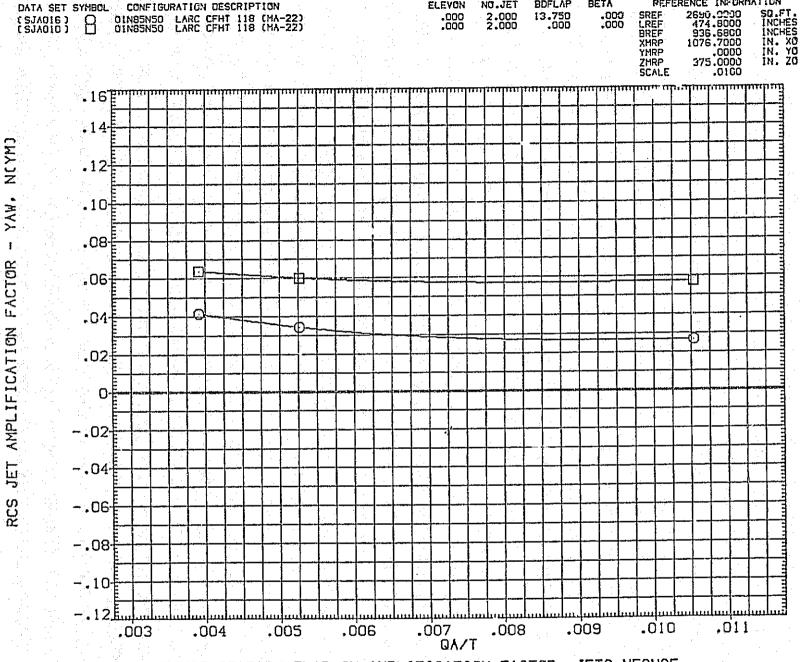


FIGURE 44. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N50N85

CC)ALPHA = 10.00

PAGE



REFERENCE INFORMATION

BETA

BDFLAP

NO.JET

FIGURE 44. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N50N85 PAGE 740 (D)ALPHA = 20.00

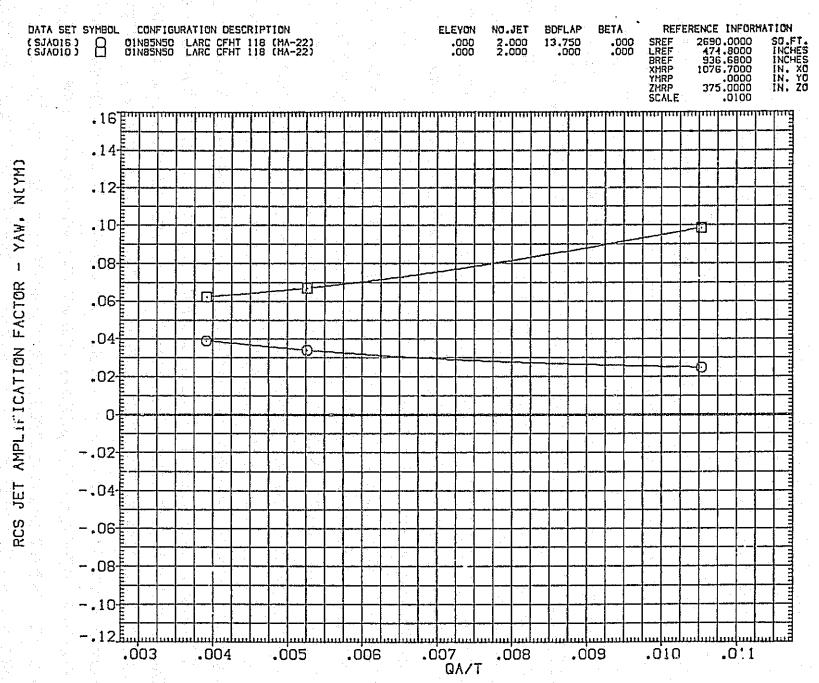
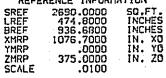


FIGURE 44. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N50N85

(E)ALPHA = 35.00

PAGE



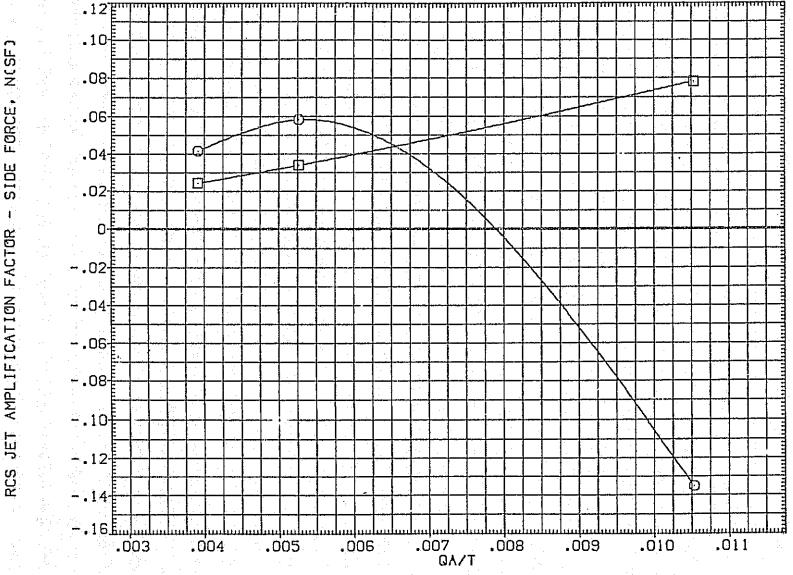


FIGURE 44. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N50N85

(A)ALPHA = -8.00

PAGE 742

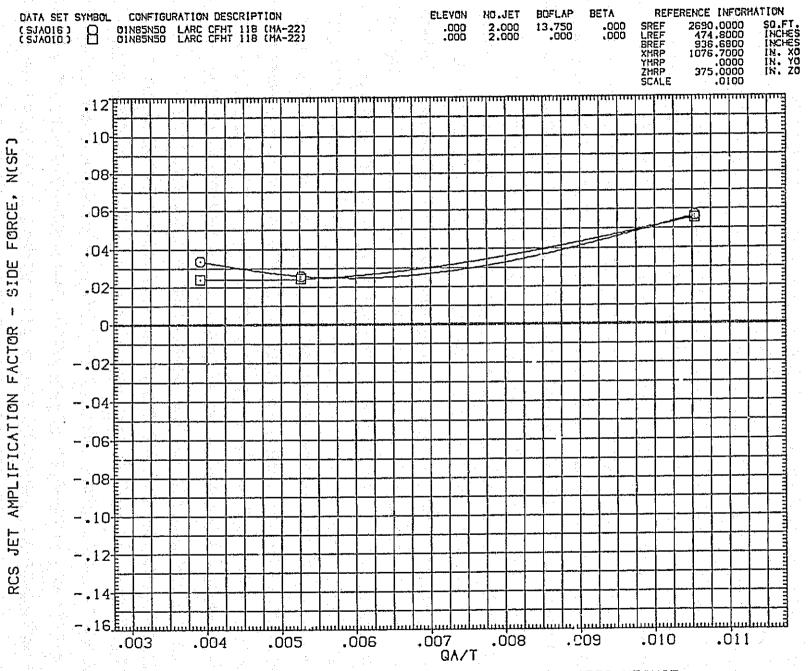


FIGURE 44. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N50N85

(B) ALPHA = .00

PAGE

N(SF)

FORCE,

SIDE

FACTOR

JET

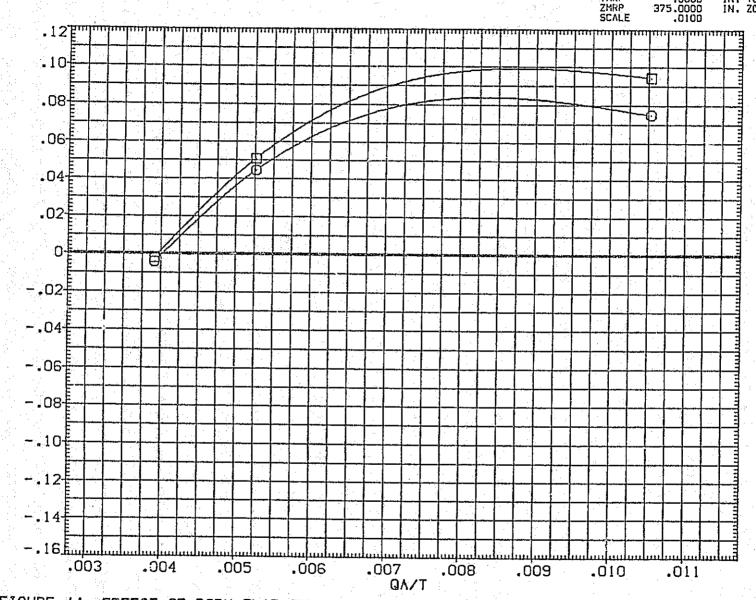


FIGURE 44. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N50N85

(C)ALPHA = 10.00

PAGE 744

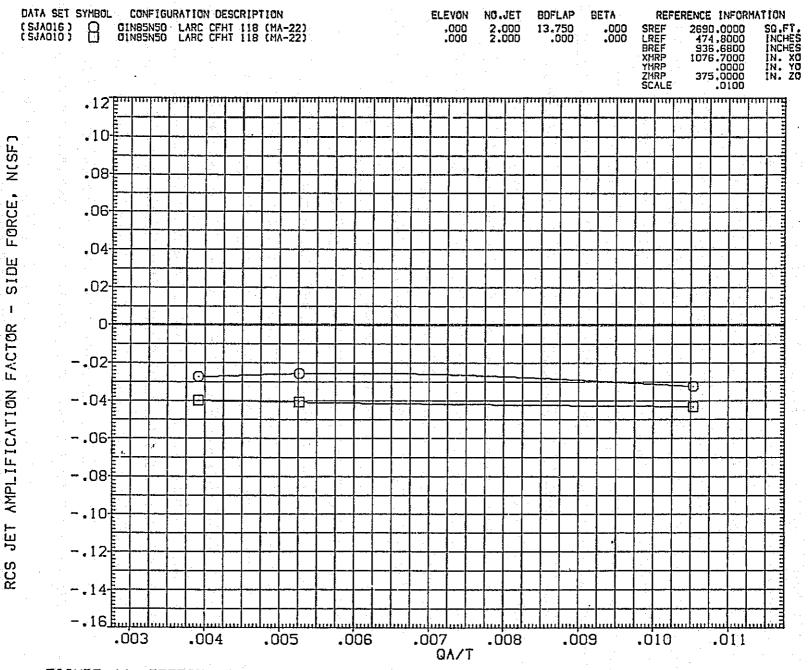


FIGURE 44. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N50N85

CD)ALPHA = 20.00

PAGE

FIGURE 44. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N50N85

(E)ALPHA = 35.00

PAGE 746

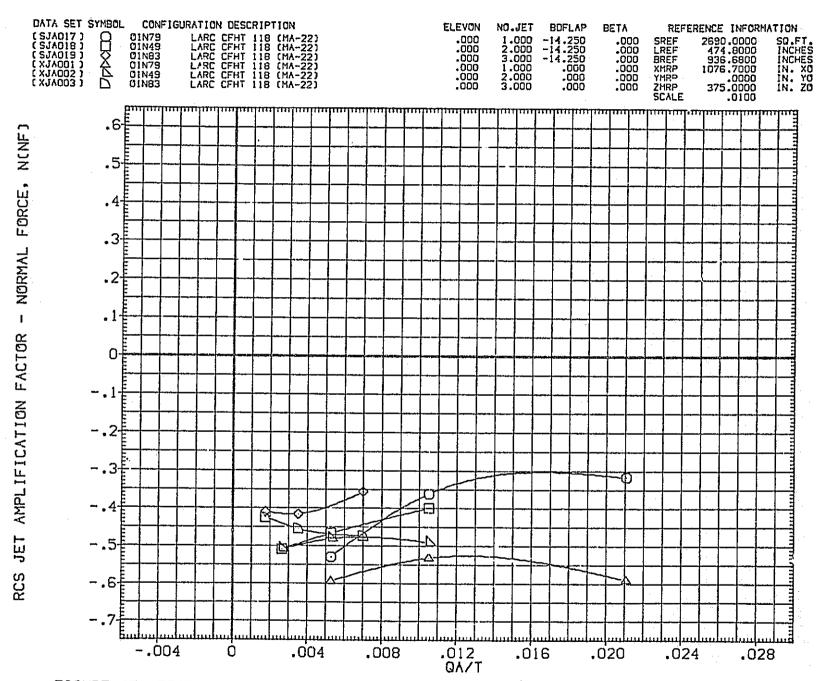


FIGURE 45. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N79,N49,N83

(A)ALPHA = -8.00

PAGE 747

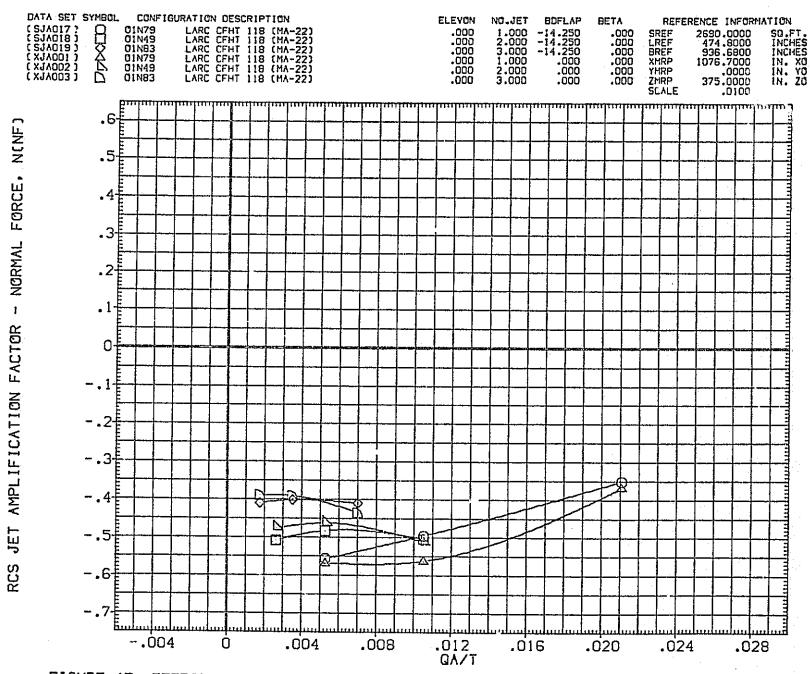


FIGURE 45. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N79, N49, N33

(B) ALPHA = .00

PAGE 748

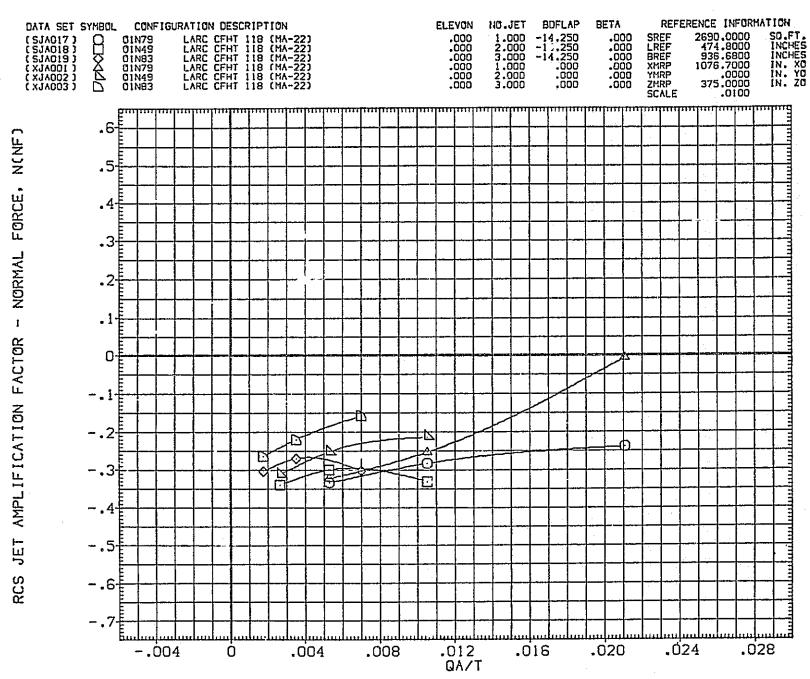


FIGURE 45. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N79, N49, N83

(C)ALPHA = 10.00

PAGE 749

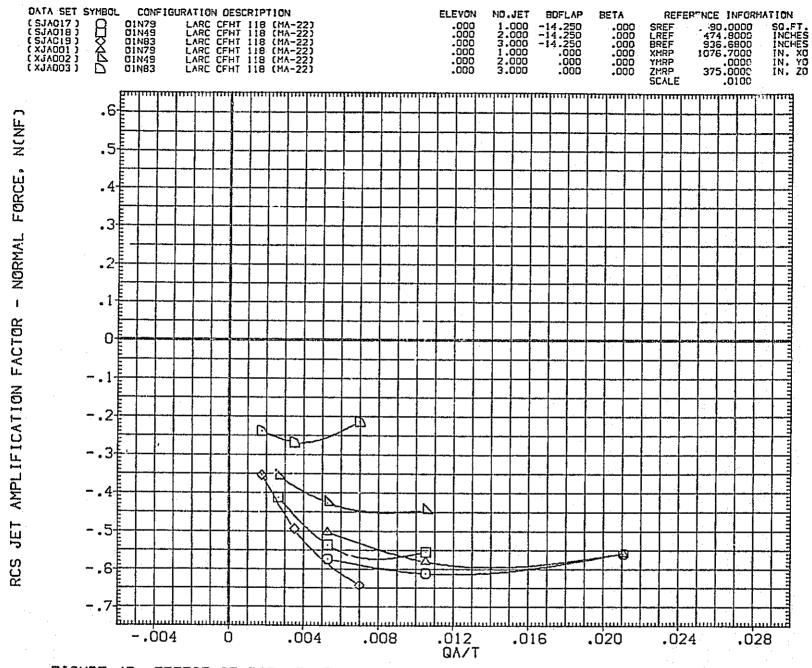


FIGURE 45. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N79, N49, N83

(D)ALPHA = 20.00 PAGE 750

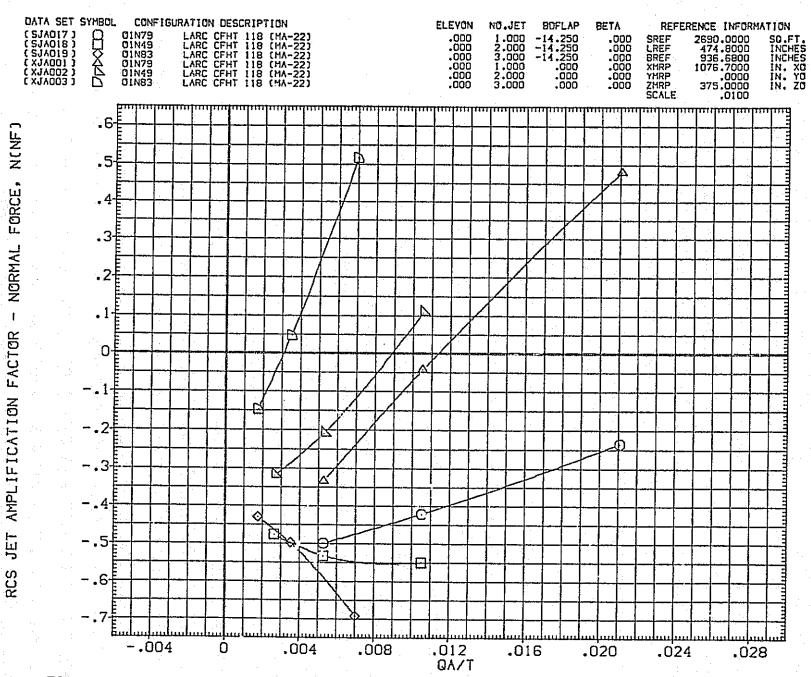


FIGURE 45. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N79, N49, N83

(E)ALPHA = 35.00

PAGE 751

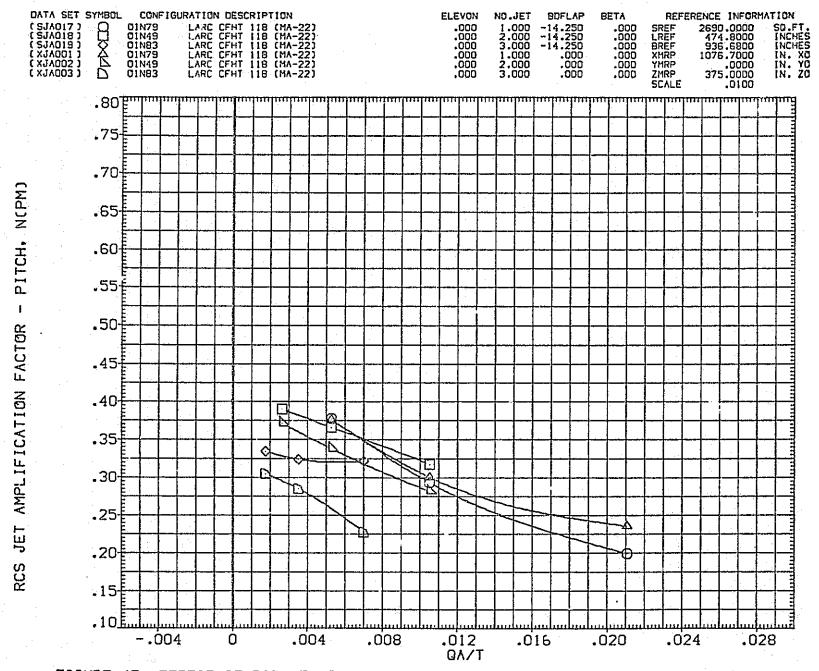


FIGURE 45. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N79, N49, N83

(A)ALPHA = -8.00

PAGE 752

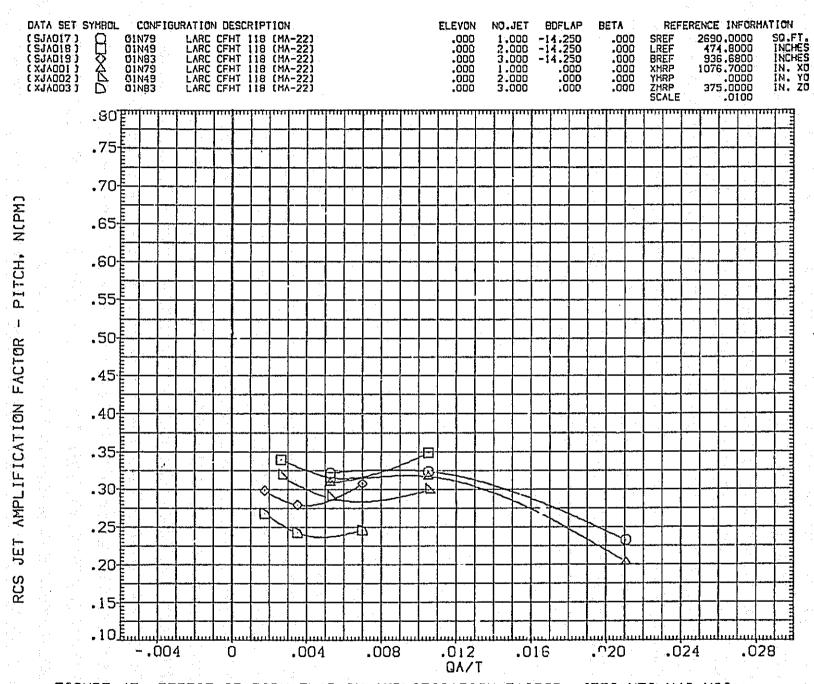


FIGURE 45. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N79, N49, N83

(B) ALPHA = .00

PAGE

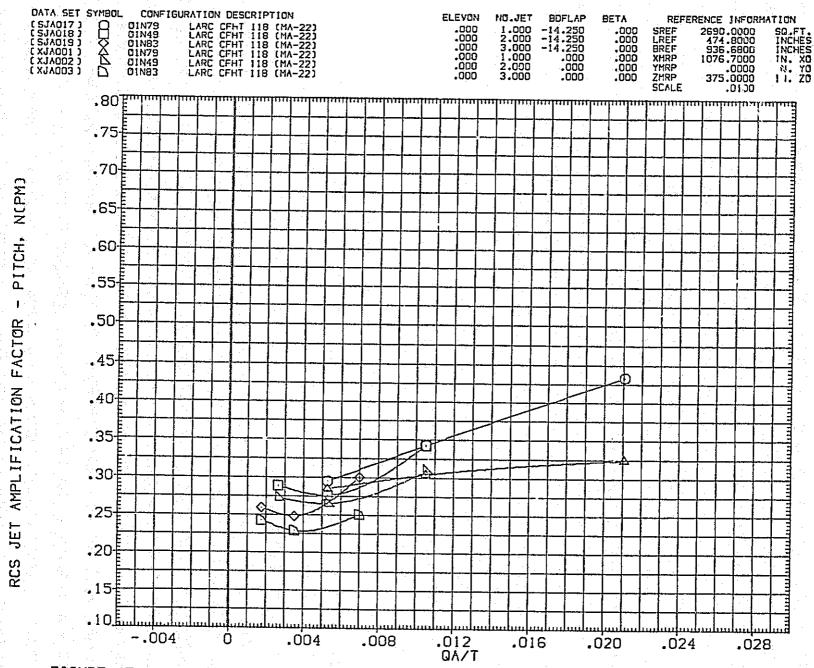


FIGURE 45. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N79, N49, N83

CC) ALPHA = 10.00

PAGE 754

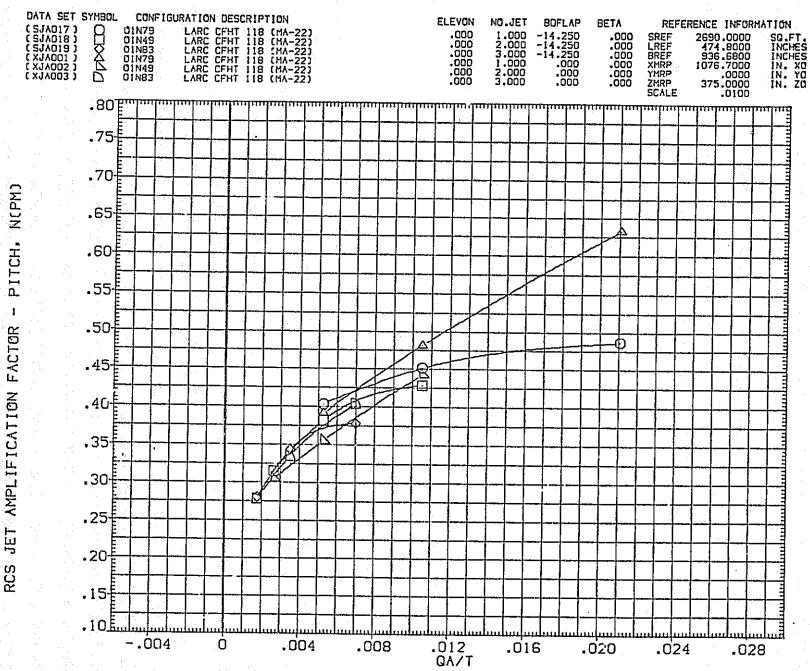


FIGURE 45. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N79, N49, N83

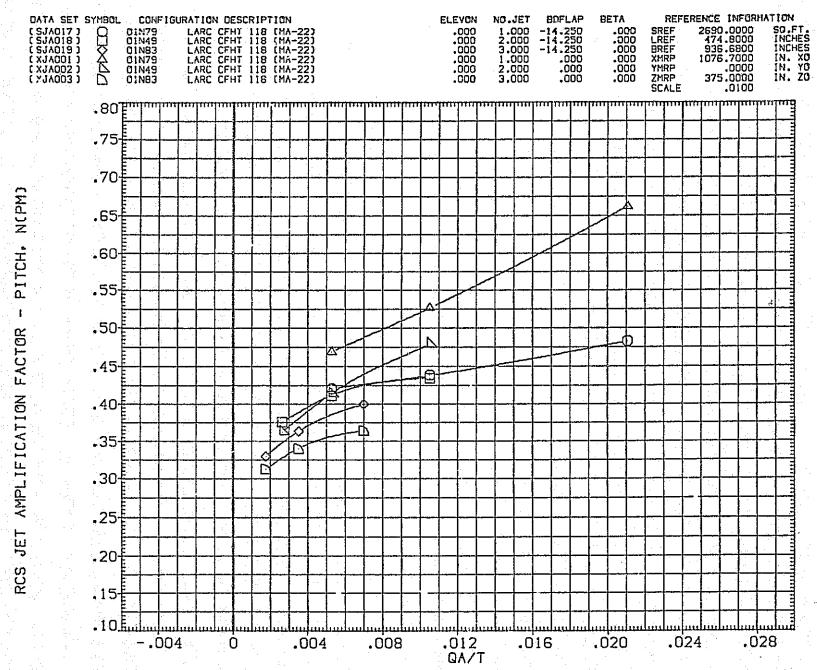


FIGURE 45. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N79, N49, N83

(E)ALPHA = 35.00

PAGE 756

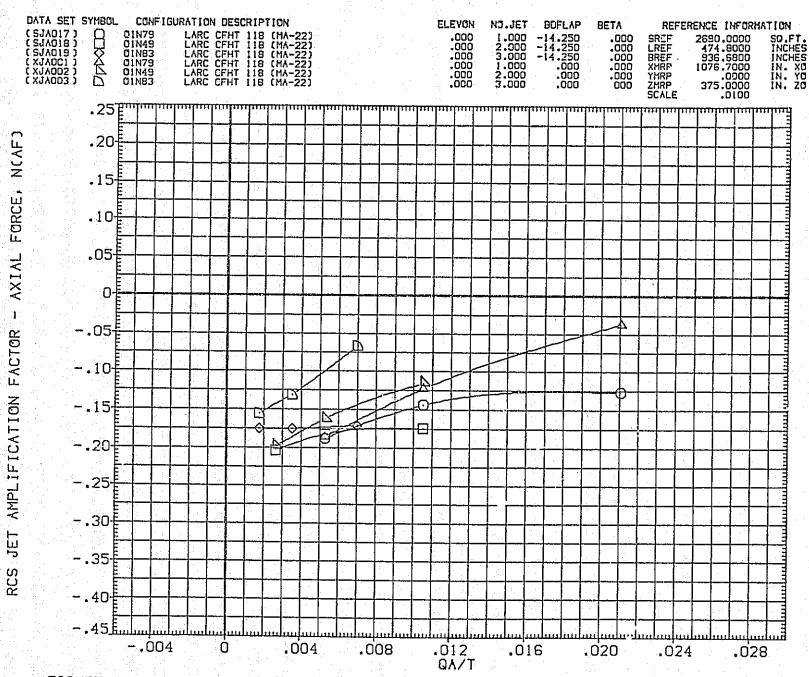


FIGURE 45. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N79, N49, N83

[A]ALPHA = -8.00

PAGE 757

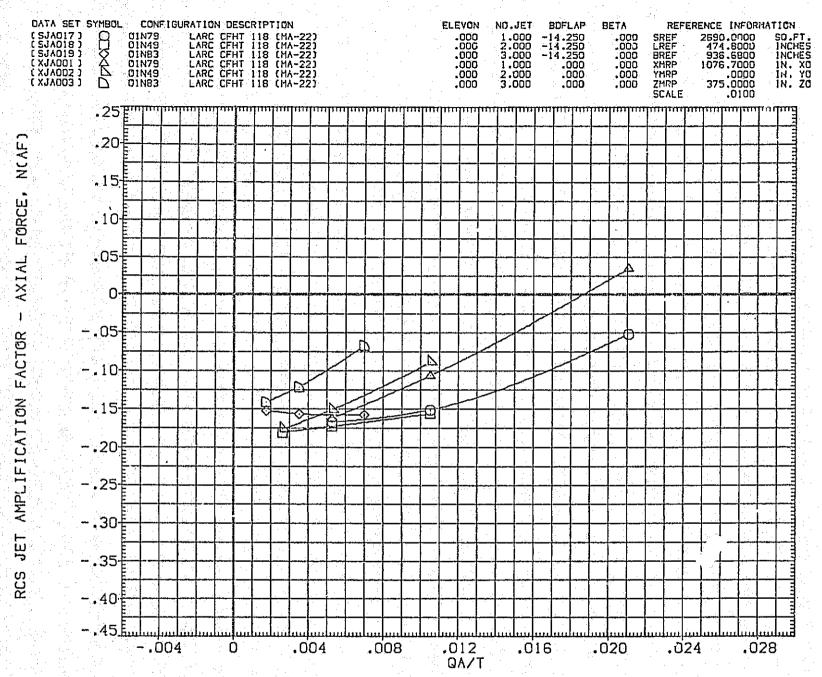


FIGURE 45. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N79, N49, N83

(B) ALPHA = .00

PAGE 758

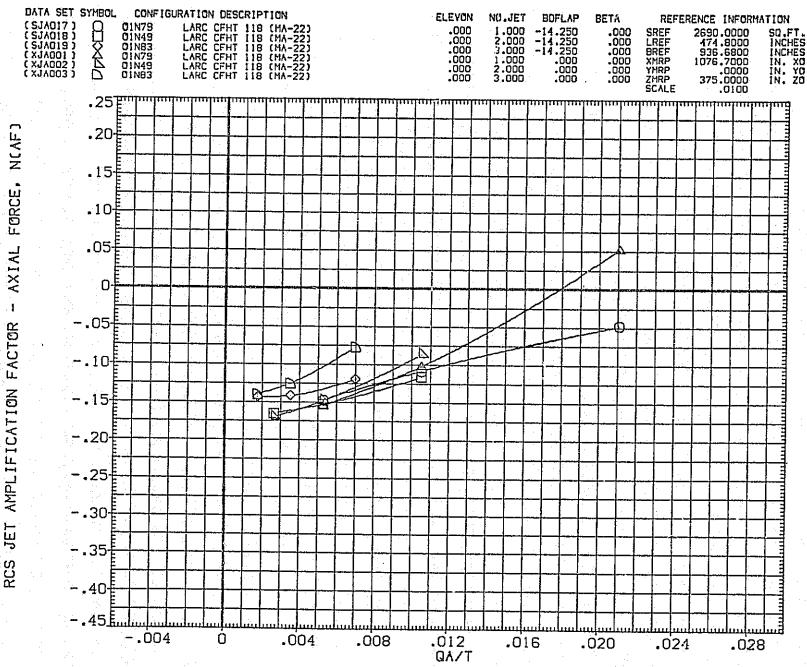


FIGURE 45. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N79, N49, N83

(C) ALPHA = 10.00

PAGE 759

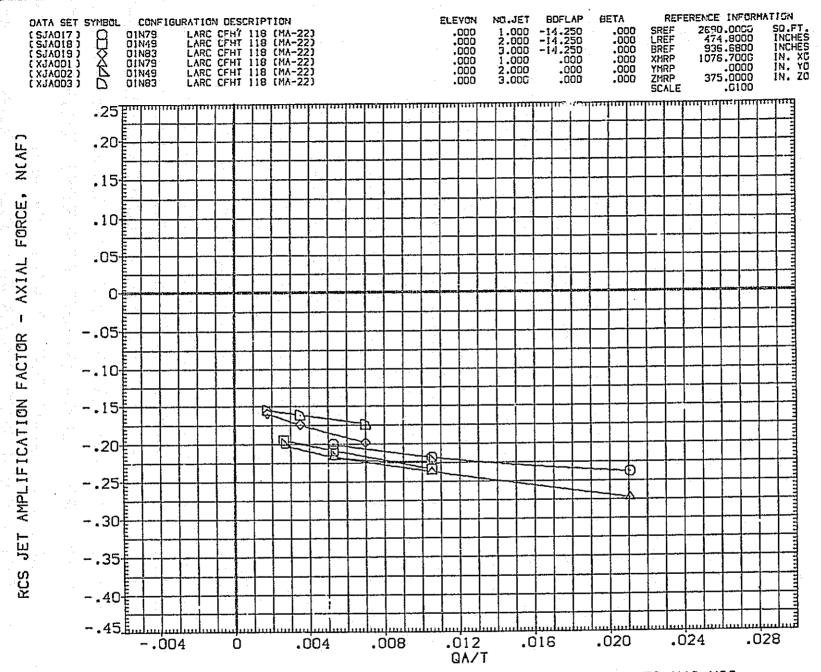


FIGURE 45. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N79, N49, N83

CD) ALPHA = 20.00

PAGE 760

Day

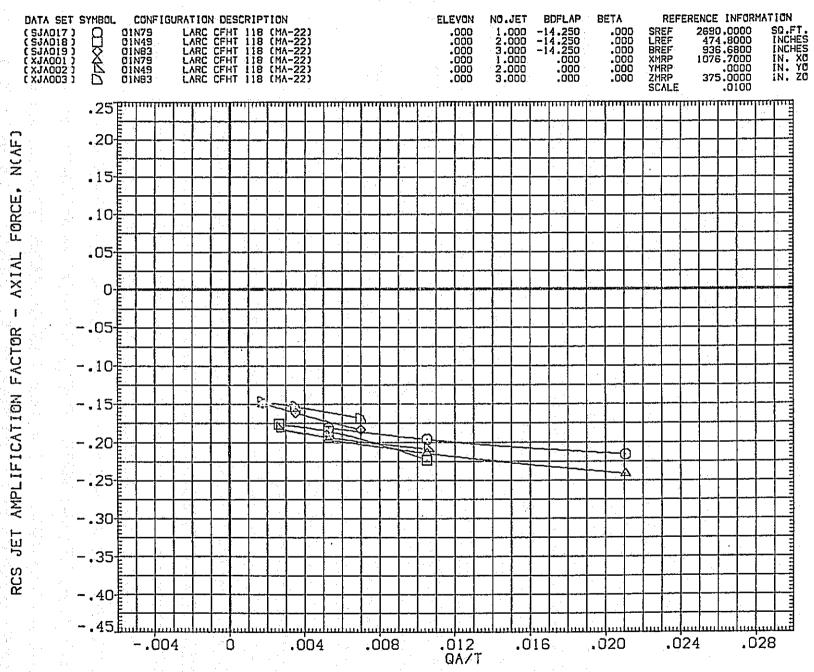


FIGURE 45. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N79,N49,N83

(E)ALPHA = 35.00

PAGE 761

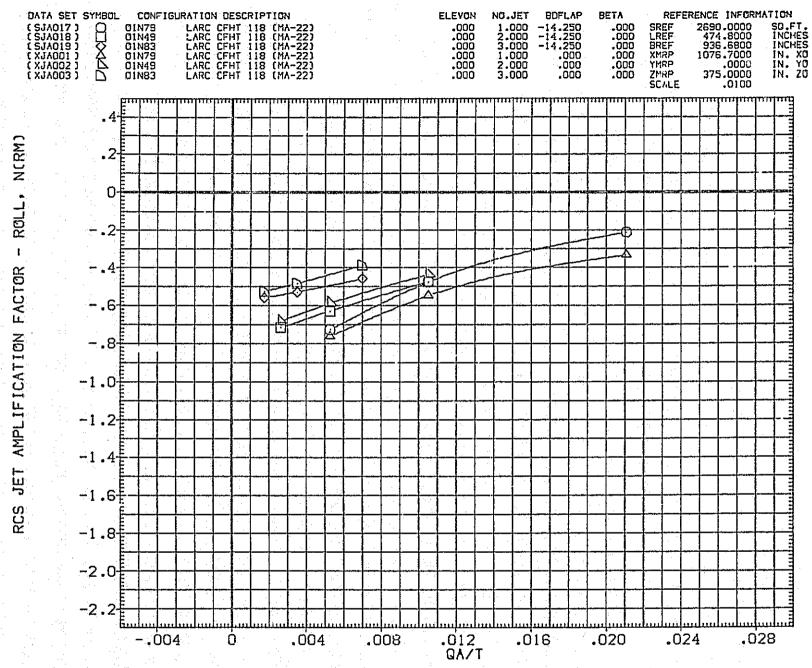


FIGURE 45. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N79,N49,N83

(A)ALPHA = -8.00

PAGE 762

A SANDE CONTRACTOR DE CARACTER ESTA CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CARACTER DE CARACTER DE CONTRACTOR DE CARACTER DE CARACTER DE CONTRACTOR DE CARACTER DE C

renewa na Light na Majarat dalah kenalah kacamatan Light

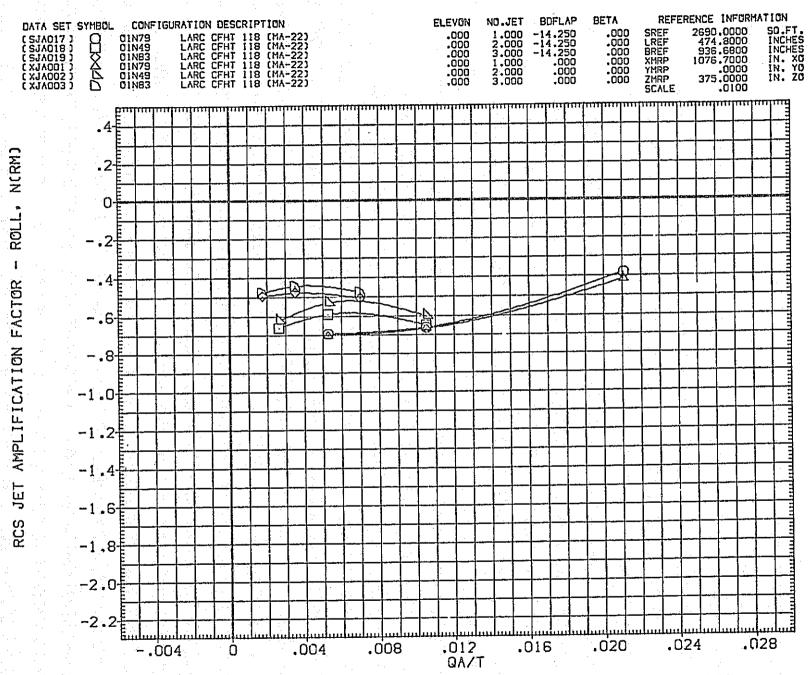


FIGURE 45. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N79, N49, N83

(B) ALPHA = .00

PAGE

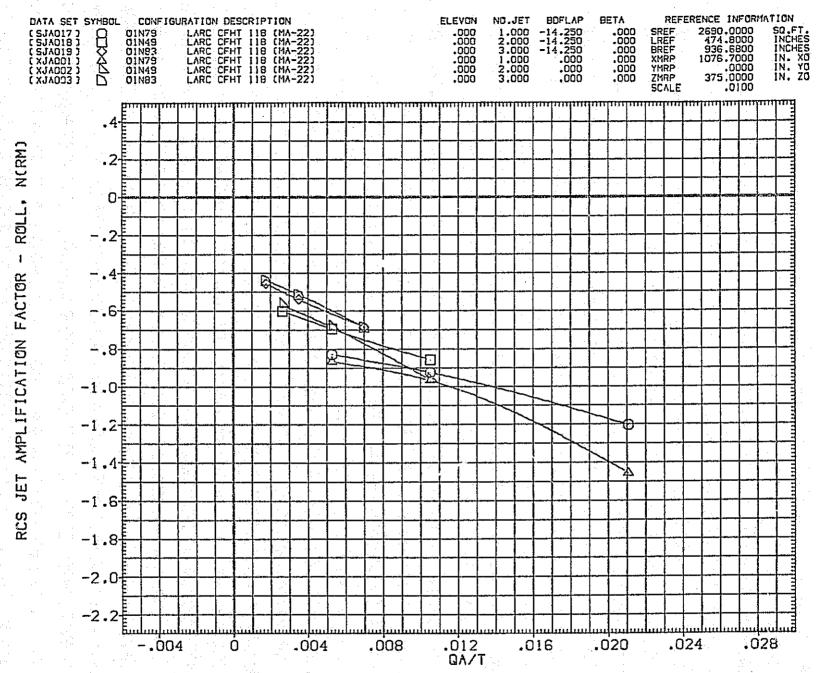


FIGURE 45. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N79, N49, N83

(C)ALPHA = 10.00

PAGE 764

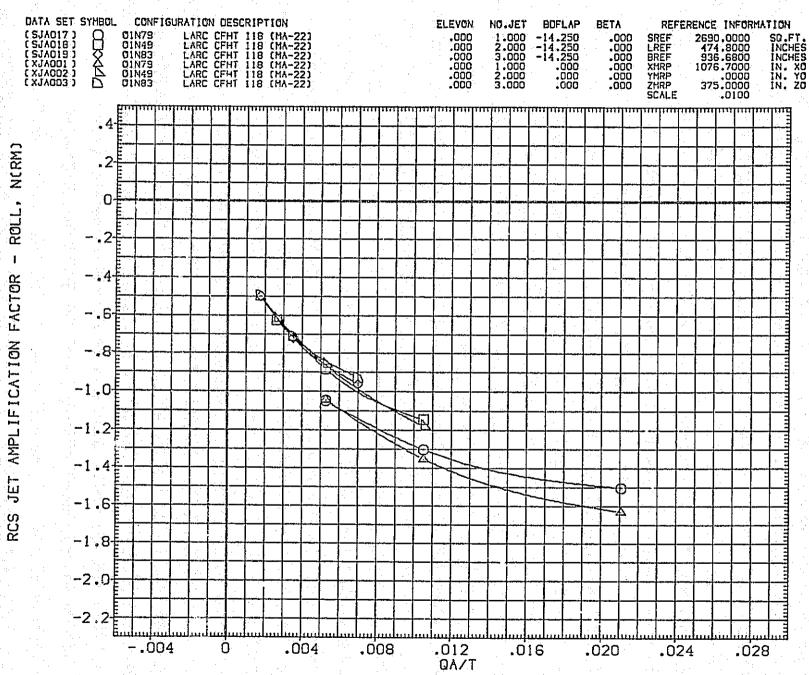


FIGURE 45. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N79, N49, N83

CDJALPHA = 20.00

PAGE 765

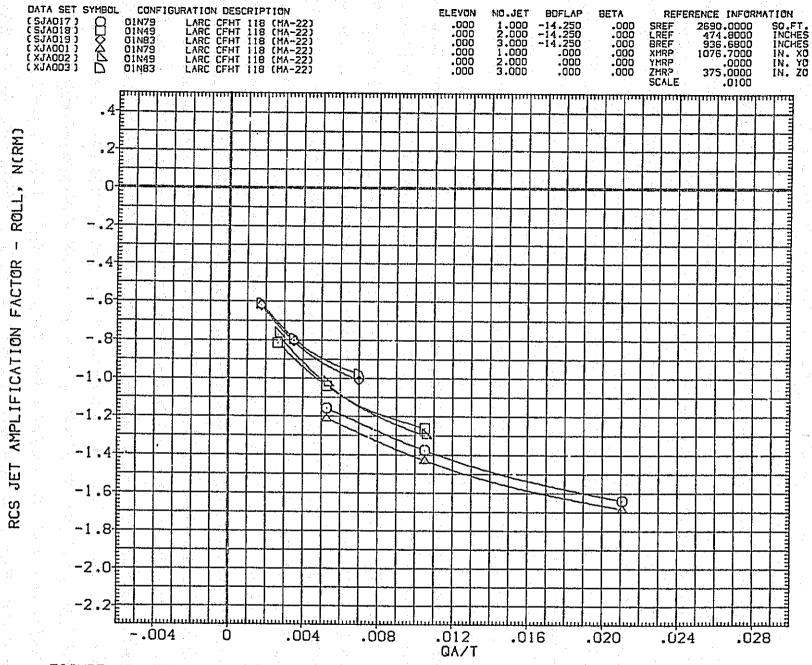


FIGURE 45. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N79, N49, N83

(E)ALPHA = 35.00

PAGE 766

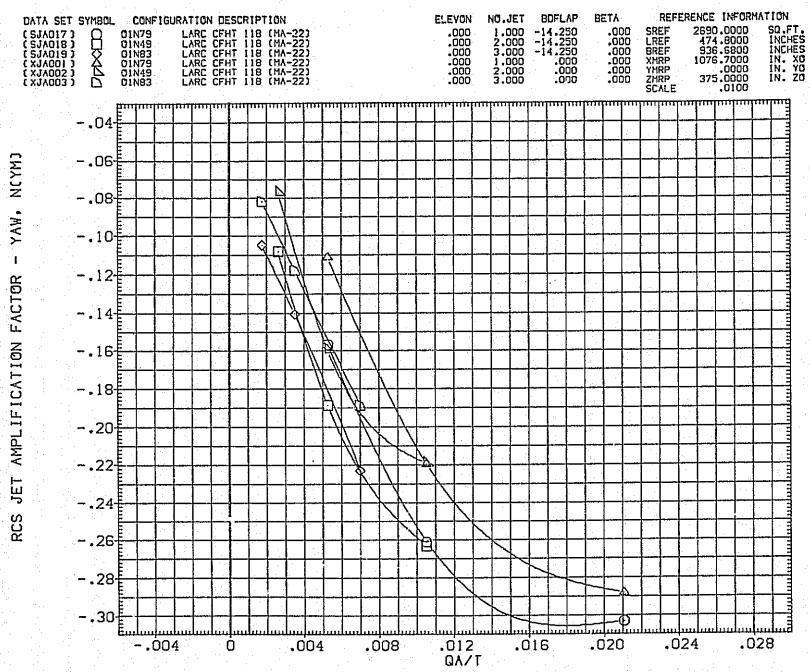


FIGURE 45. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N79, N49, N83

[A]ALPHA = -8.00

PAGE 767

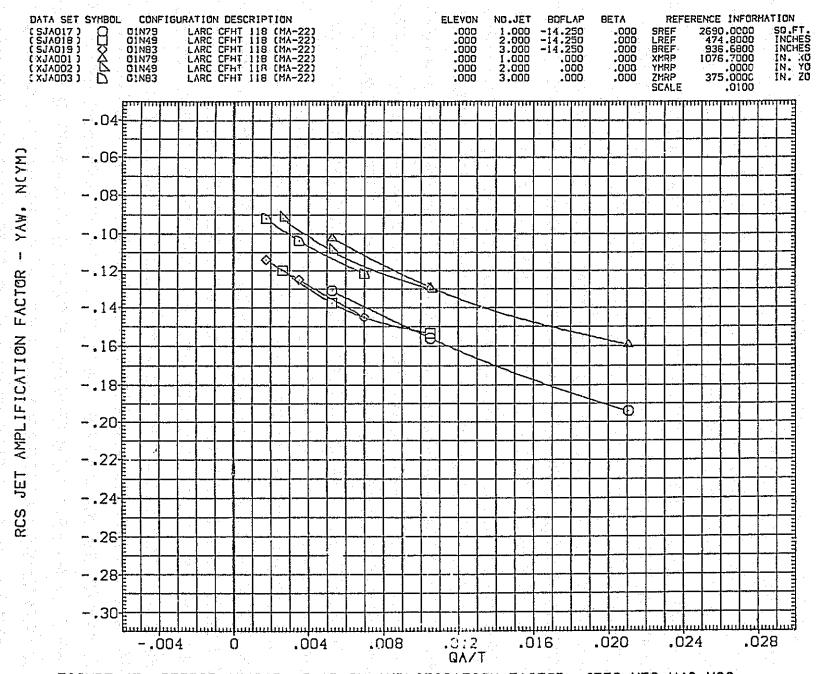


FIGURE 45. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N79, N49, N83

(B) ALPHA = .00

PAGE 768

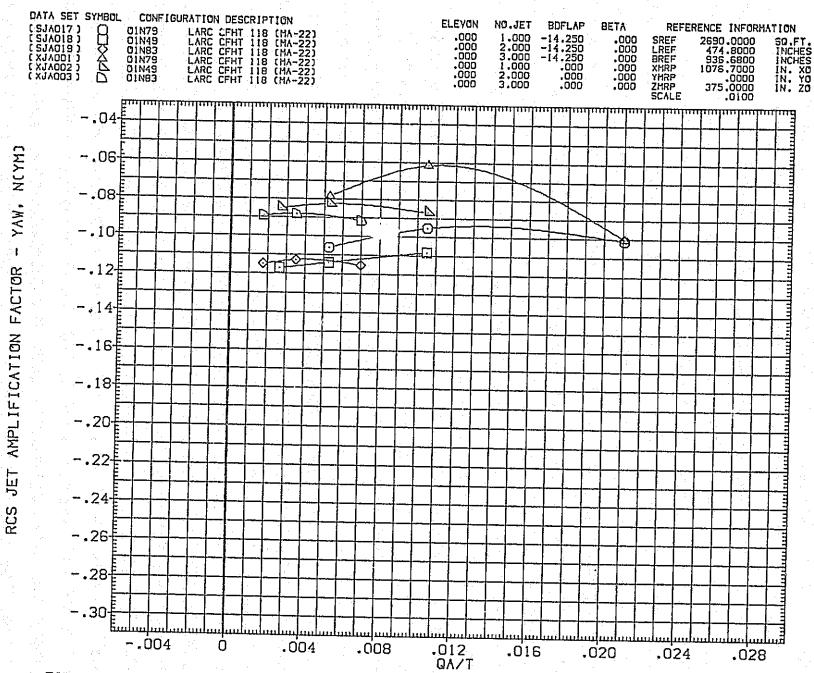


FIGURE 45. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N79, N49, N83

(C) ALPHA = 10.00

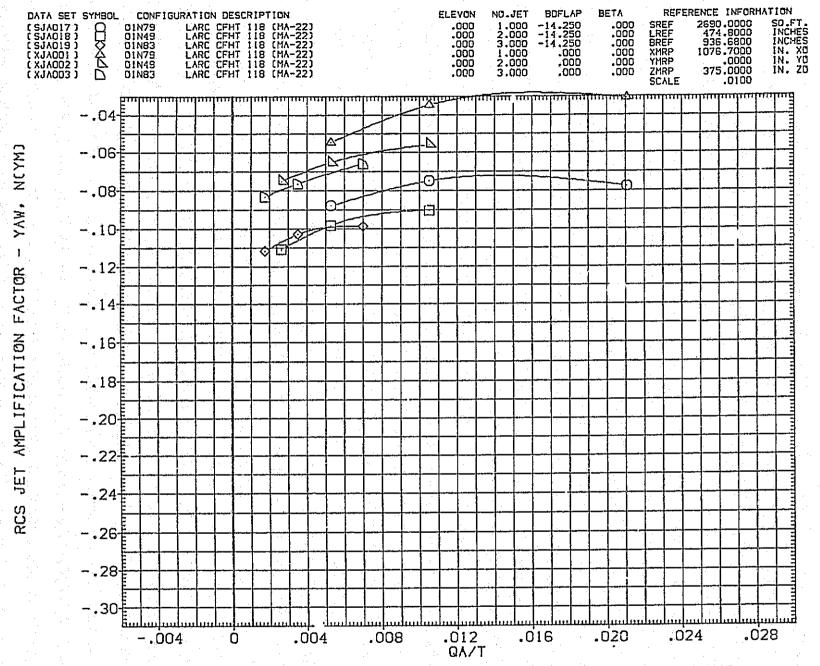


FIGURE 45. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N79, N49, N83

(D) ALPHA = 20.00

PAGE 770

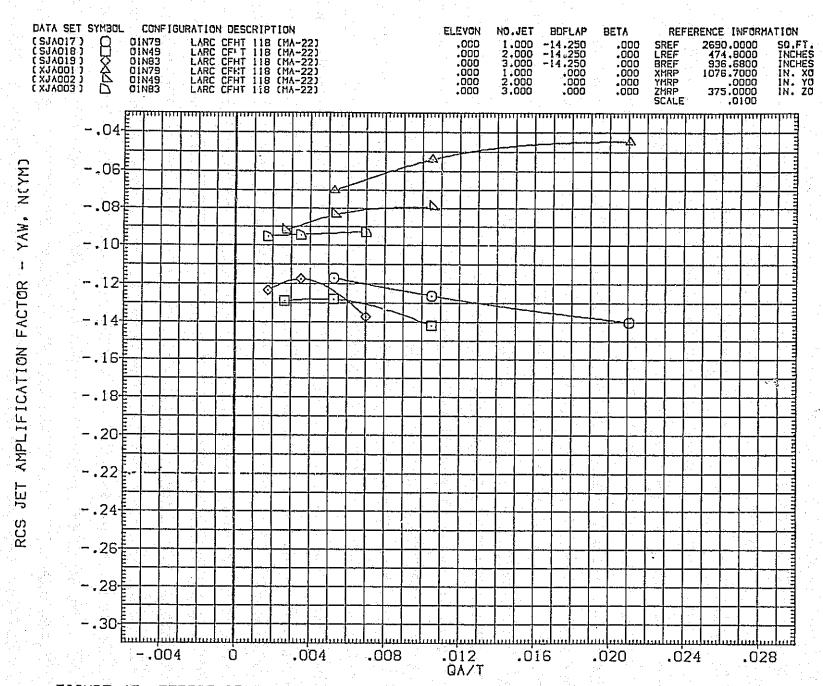


FIGURE 45. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N79,N49,N83

(E)ALPHA = 35.00

PAGE 771

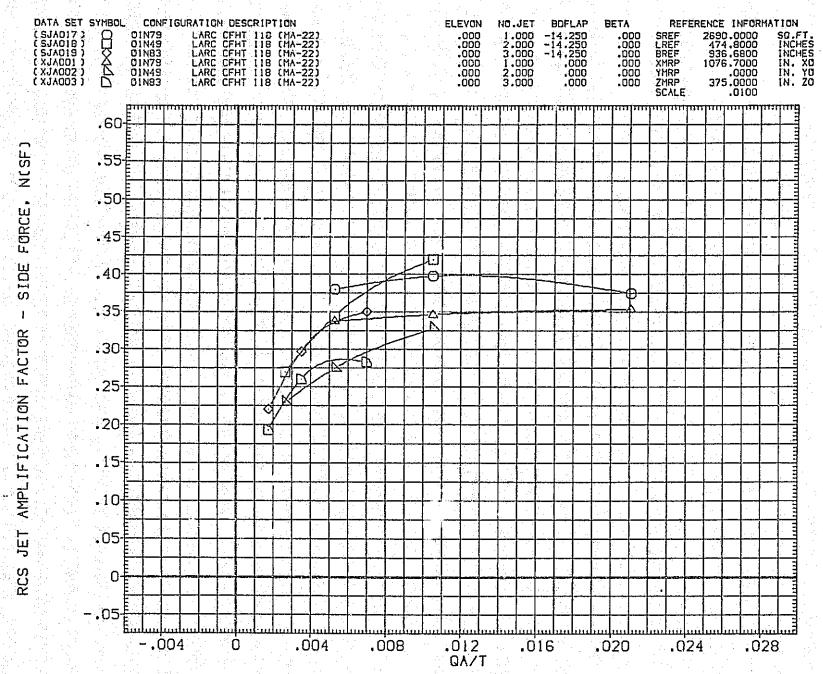


FIGURE 45. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N79,N49,N83

(A)ALPHA = -8.00

PAGE 772

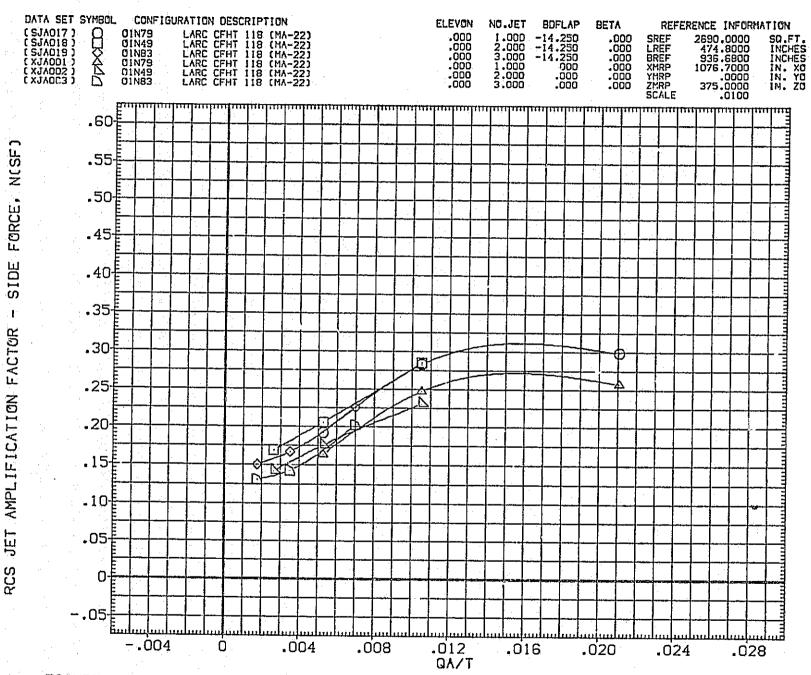


FIGURE 45. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N79, N49, N83

(B) ALPHA = .00

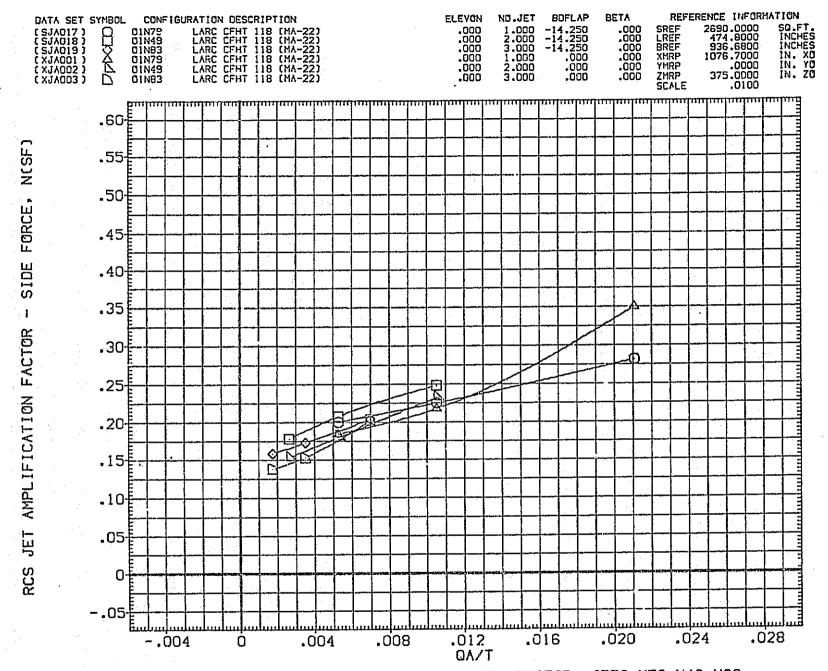


FIGURE 45. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N79,N49,N83

COALPHA = 10.00

PAGE 774

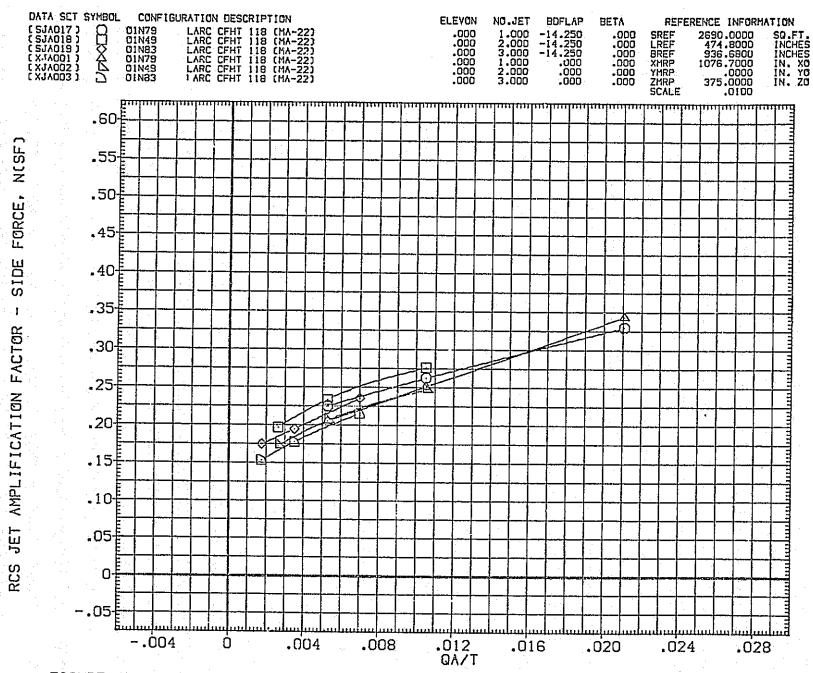


FIGURE 45. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N79, N49, N83

CD) ALPHA = 20.00

PAGE

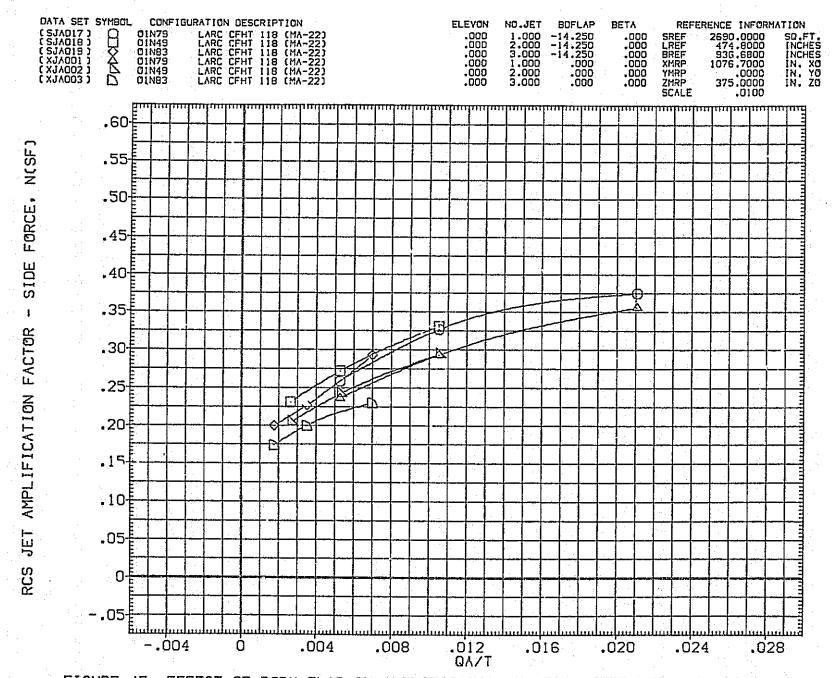
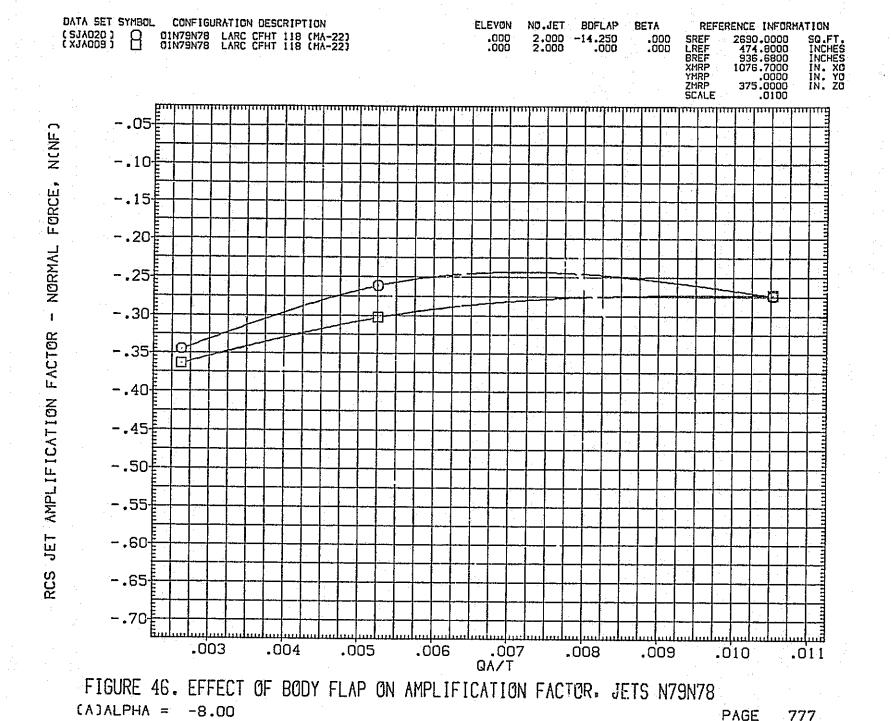


FIGURE 45. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N79, N49, N83

(E)ALPHA = 35.00

PAGE 776



FORCE,

NORMAL

AMPLIFICATION FACTOR

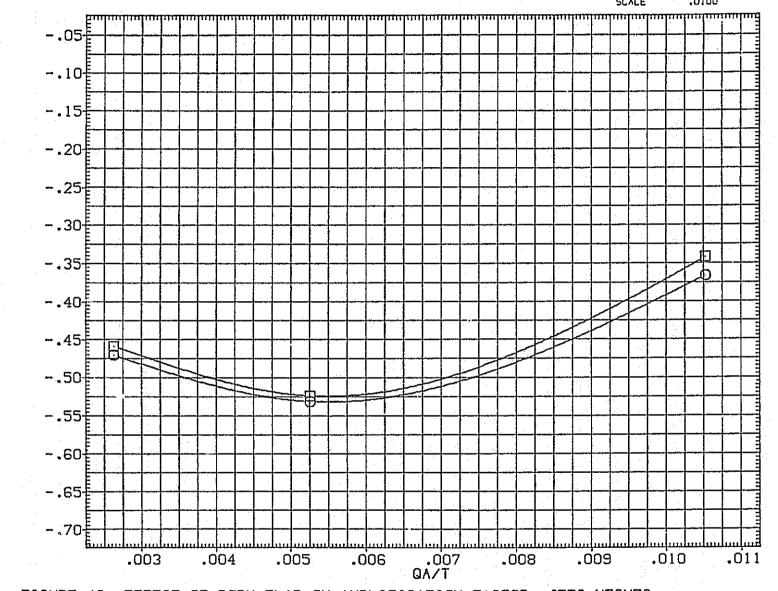


FIGURE 46. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N79N78

(B) ALPHA = .00 PAGE 778

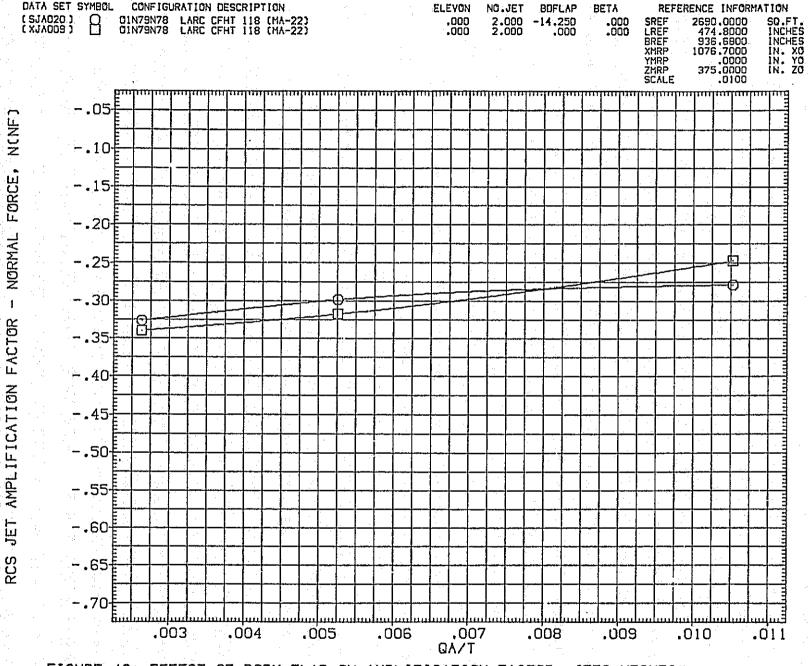


FIGURE 46. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N79N78

COALPHA = 10.00

PAGE

NORMAL FORCE,

AMPLIFICATION FACTOR

JET

IN. XO IN. YO IN. ZO

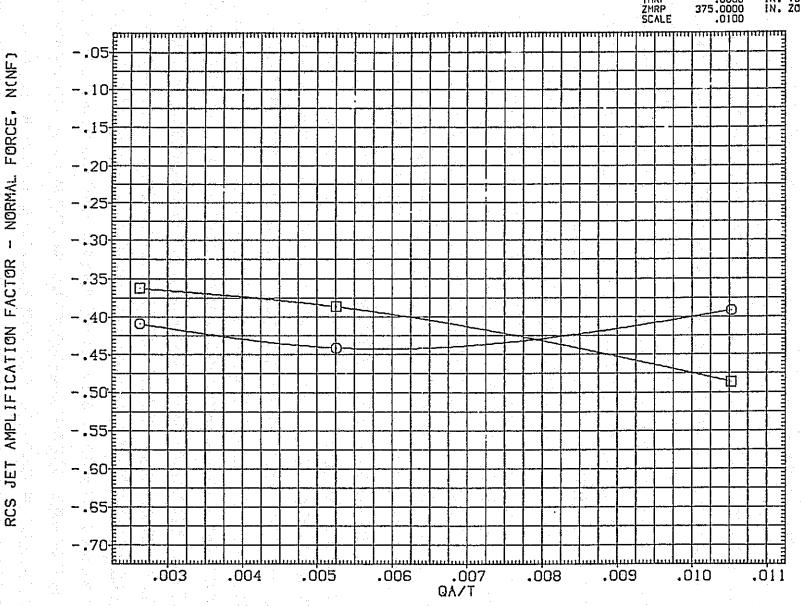


FIGURE 46. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N79N78 (D)ALPHA = 20.00PAGE 780

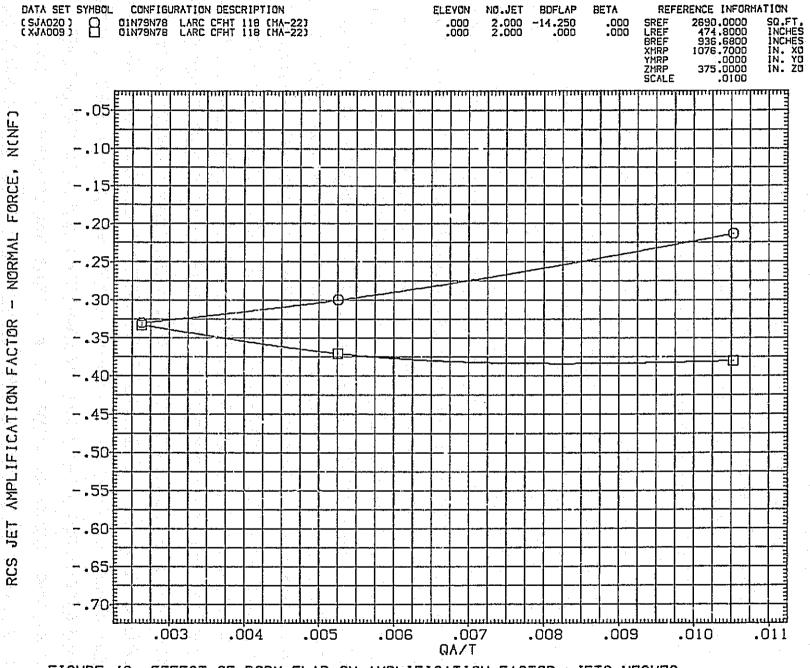
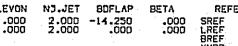


FIGURE 46. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N79N78

(E)ALPHA = 35.00 PAGE 781



REFERENCE INFORMATION
SREF 2690.0000 S0.FT.
LREF 474.8000 INCHES
BREF 936.6800 INCHES
XMRP 1076.7000 IN. X0
YMRP .0000 IN. Y0
ZMRP 375.0000 IN. Z0
SCALE .0100

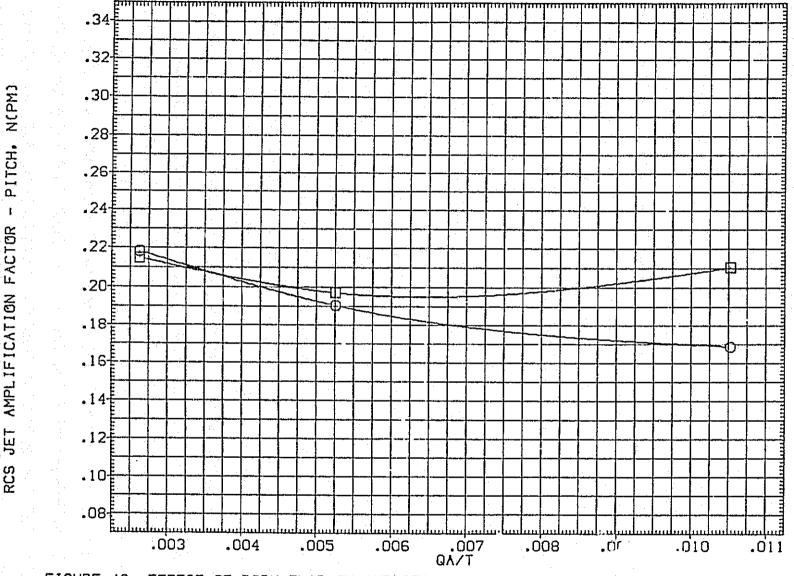


FIGURE 46. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JES N79N78

CADALPHA = -8.00

PAGE 782

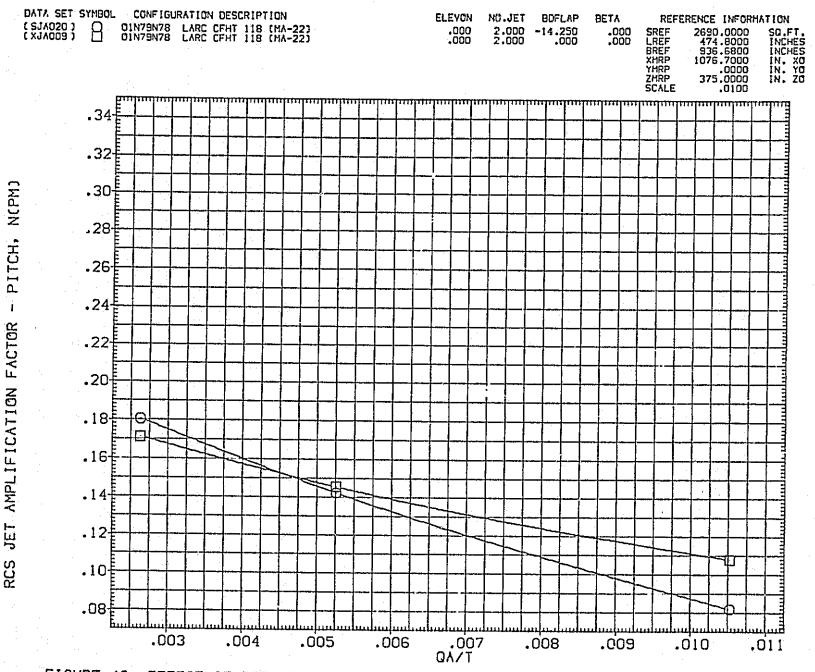


FIGURE 46. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N79N78

(B) ALPHA = .00

PITCH, NCPM)

FACTOR

AMPL IFICATION

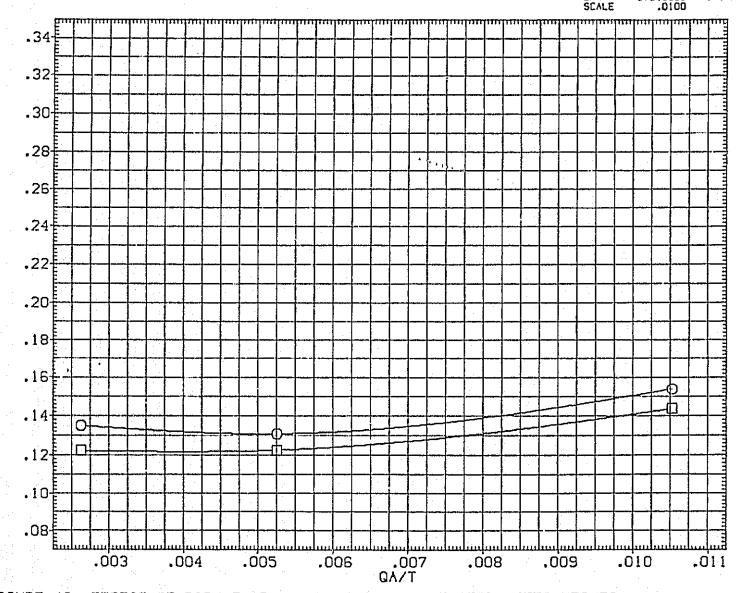


FIGURE 46. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N79N78

(C)ALPHA = 10.00 PAGE 784

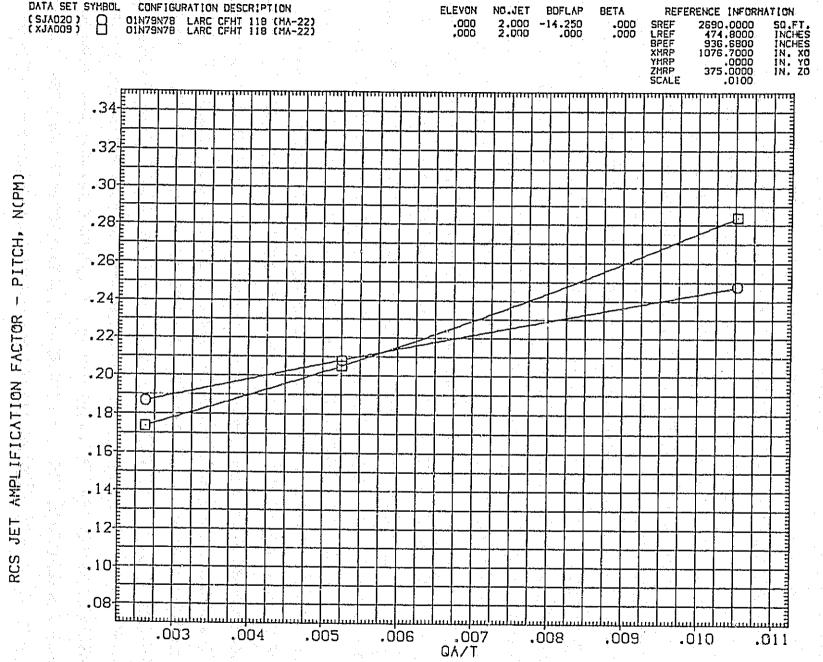


FIGURE 46. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N79N78

PAGE 785

NC PM 3

PITCH,

FACTOR

AMPL IF ICATION

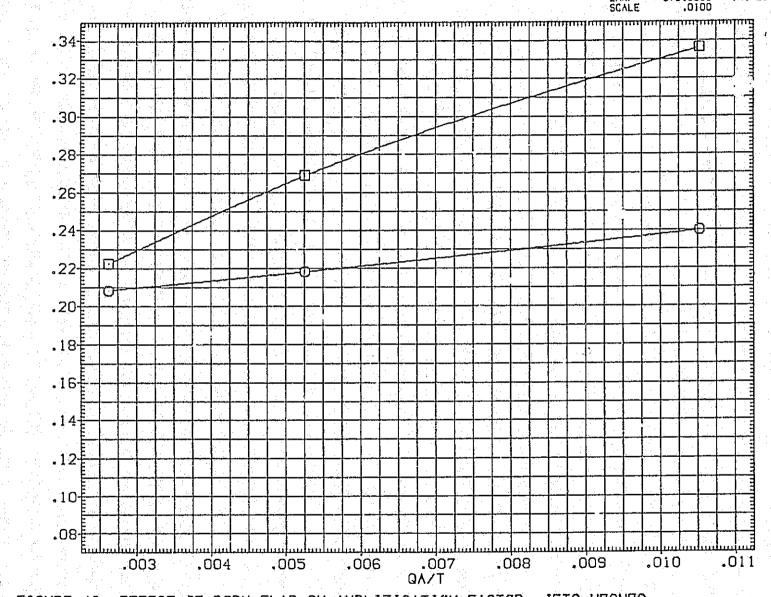
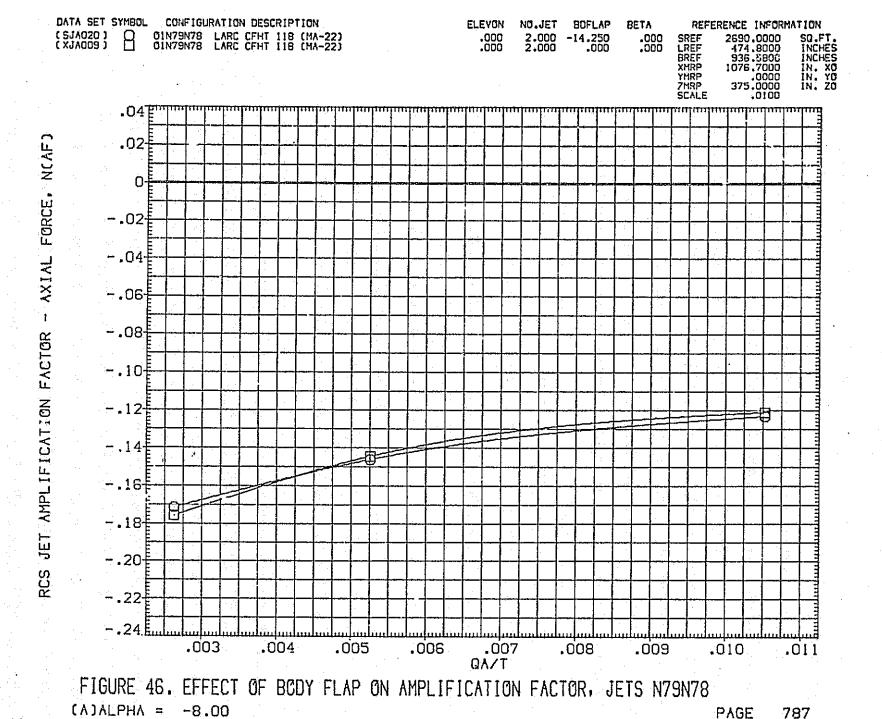
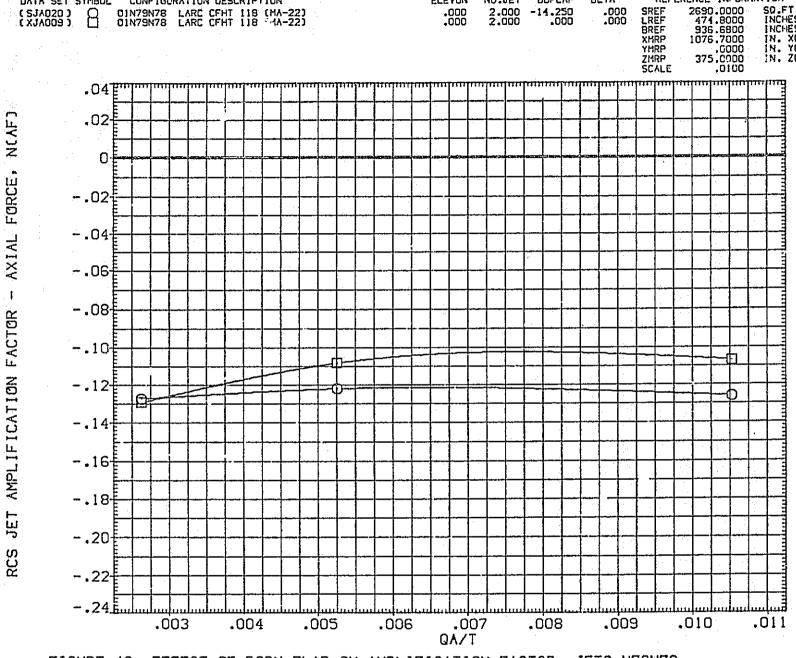


FIGURE 46. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N79N78

(E)ALPHA = 35.00

PAGE 786





ELEYON

NO.JET

BDFLAP

BETA

CONFIGURATION DESCRIPTION

REFERENCE INFORMATION

FIGURE 46. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N79N78 PAGE 788 (B)ALPHA = .00

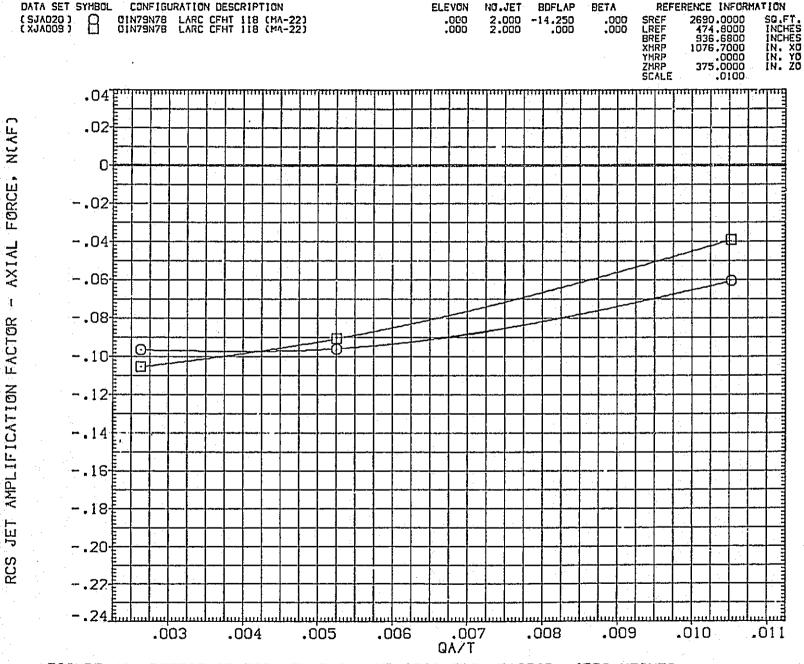


FIGURE 46. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N79N78

(C)ALPHA = 10.00 PAGE

AMPLIFICATION FACTOR

JET

REFERENCE INFORMATION
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LREF 474.8000 INCHES
RREF 936.6800 INCHES
XMRP 1076.70000 IN. X0
YMRP .0000 IN. X0
ZMRP 375.0000 IN. Z0
SCALE .0100

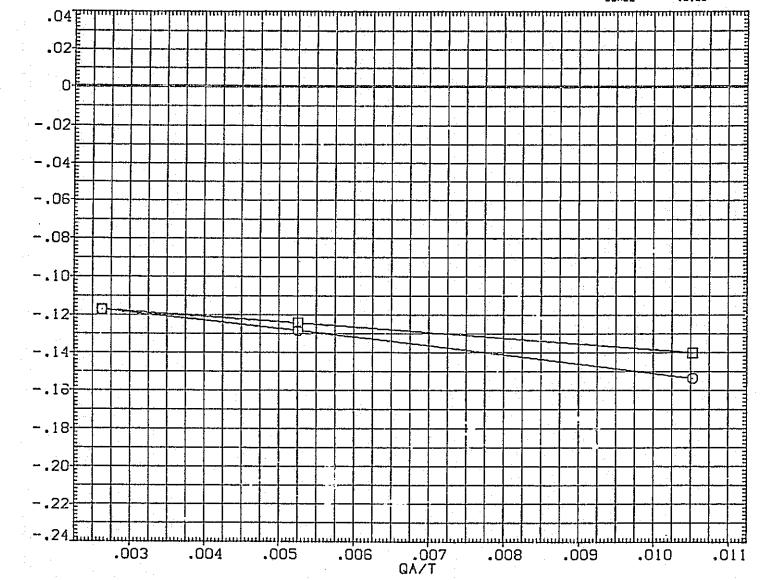


FIGURE 46. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N79N78

(D)ALPHA = 20.00

PAGE 790

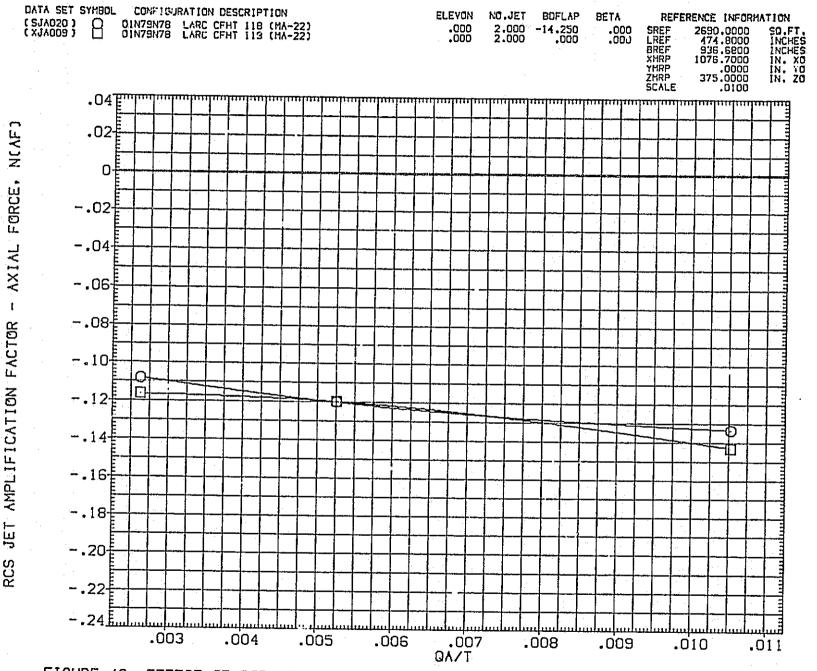


FIGURE 46. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N79N78

(E)ALPHA = 35.00

PAGE 791

ROLL. NCRM)

JET AMPLIFICATION FACTOR

RCS

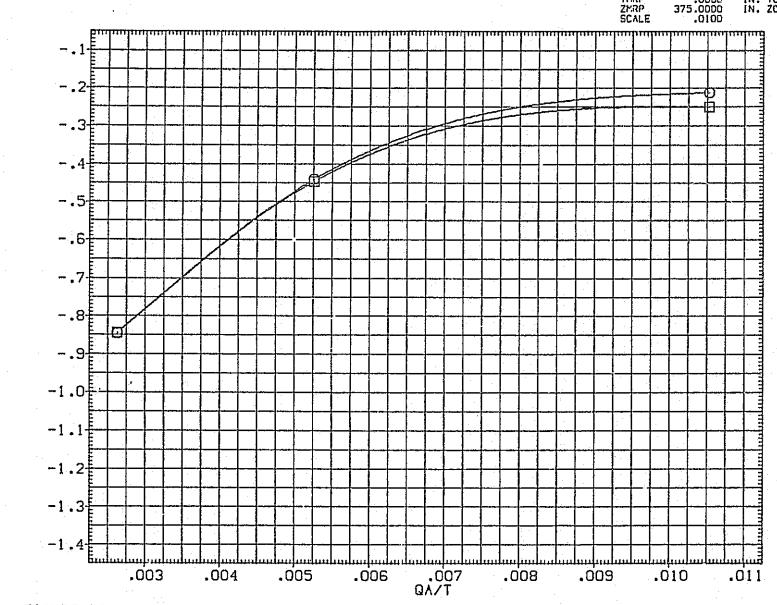
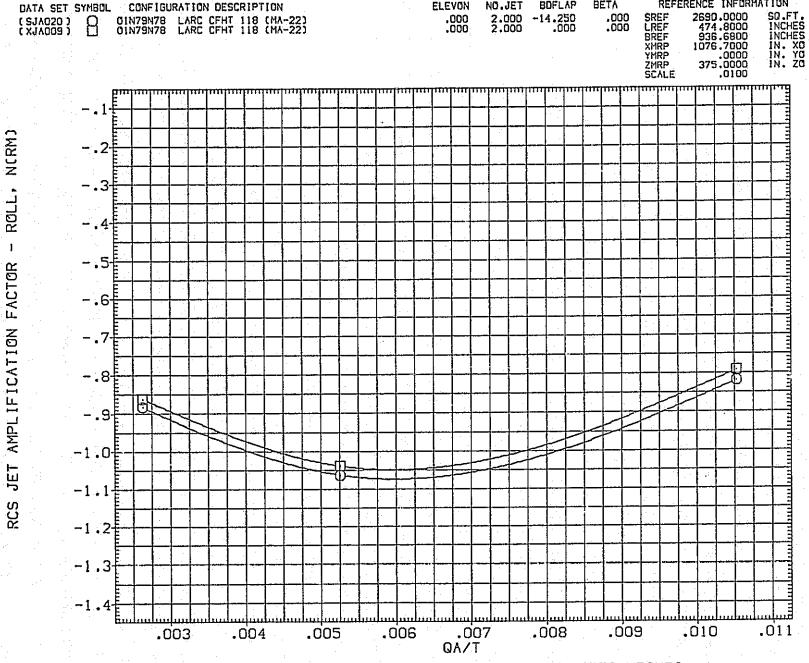


FIGURE 46. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N79N78

[A]ALPHA = -8.00

PAGE 792



BETA

BOFLAP

NO.JET

REFERENCE INFORMATION

FIGURE 46, EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N79N78 PAGE (B)ALPHA = .00

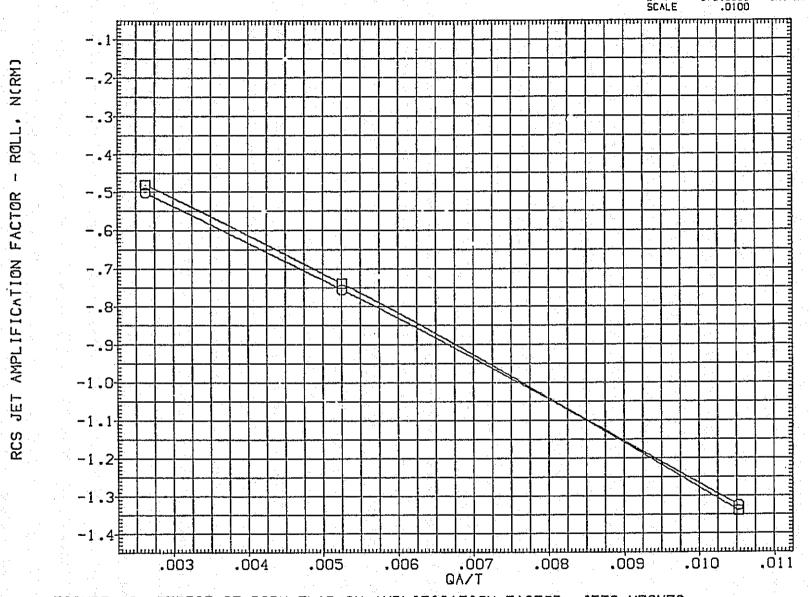


FIGURE 46. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N79N78

(C)ALPHA = 10.00 PAGE 794

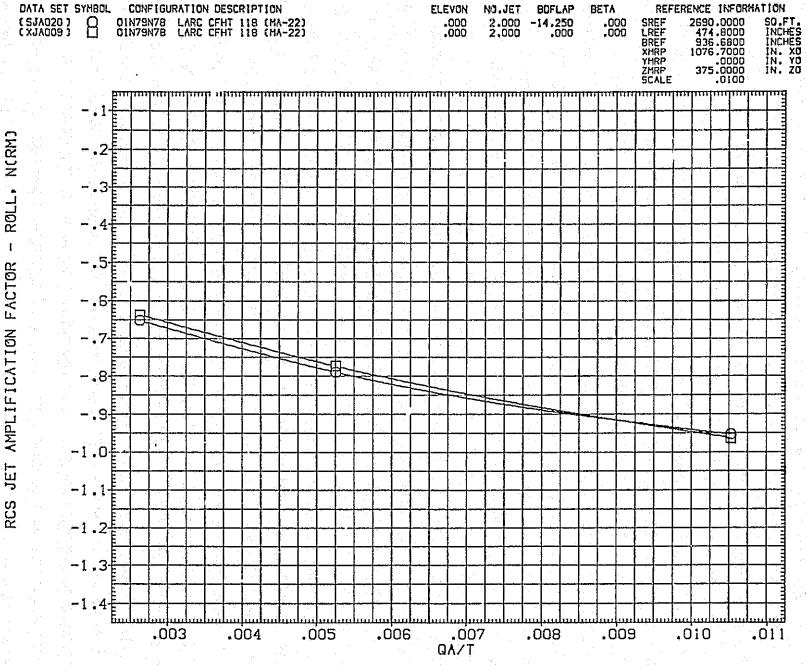


FIGURE 46. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N79N78

[D]ALPHA = 20.00 PAGE 795

N(RM)

ROLL,

FACTOR

AMPL IF ICATION

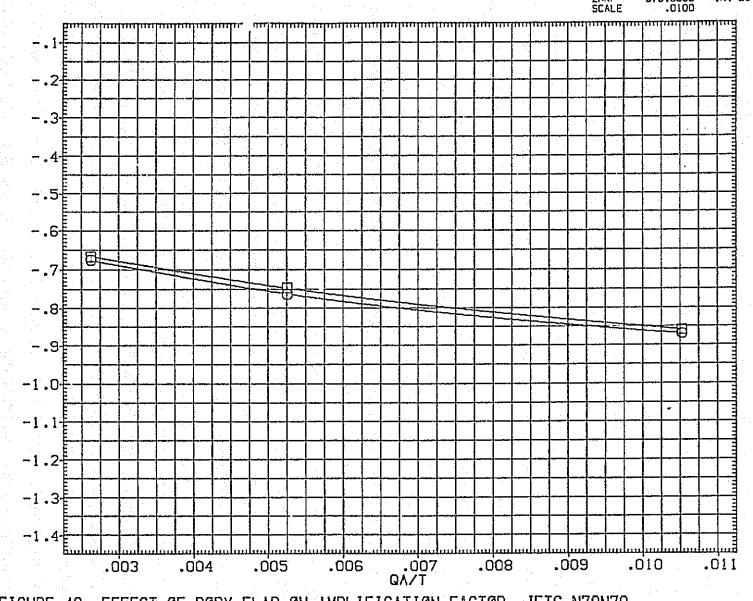


FIGURE 46. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N79N78

(E)ALPHA = 35.00

PAGE 796

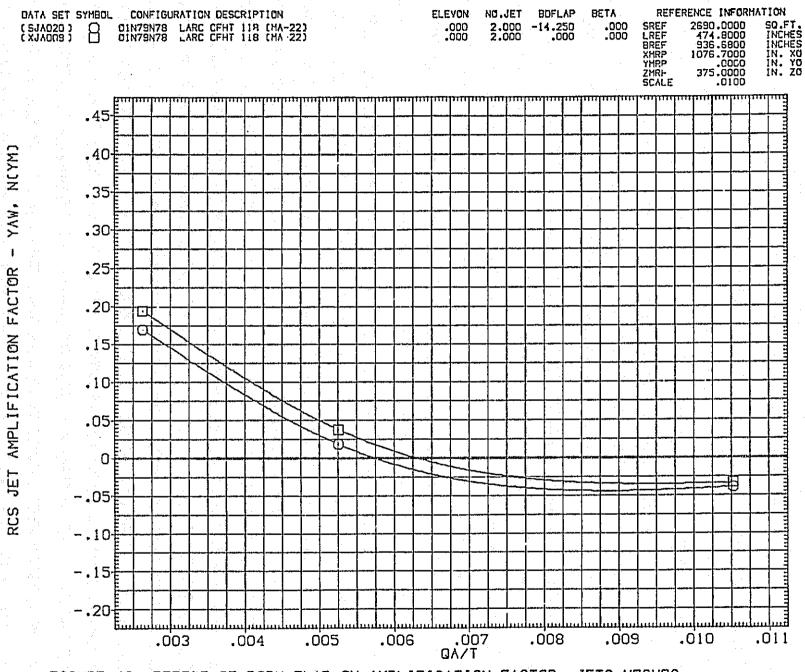


FIGURE 46. EFFE(T OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N79N78

(A)ALPHA = -8.00

PAGE 797

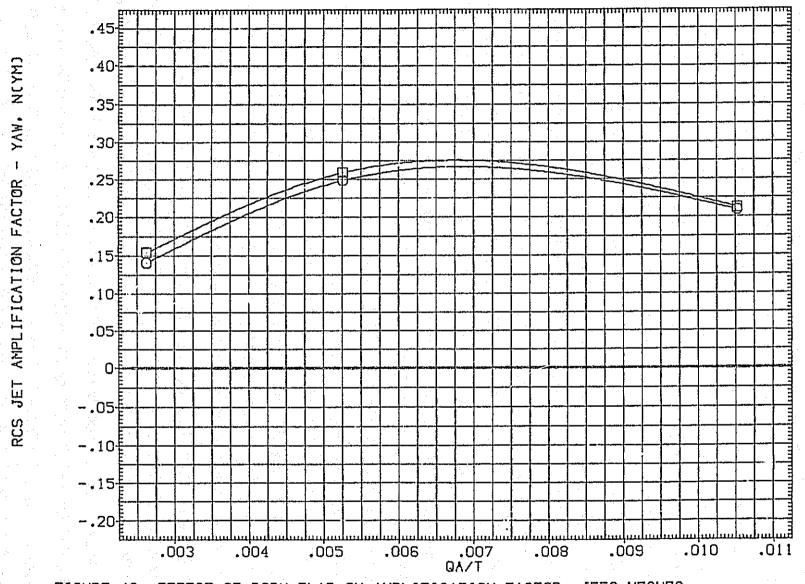
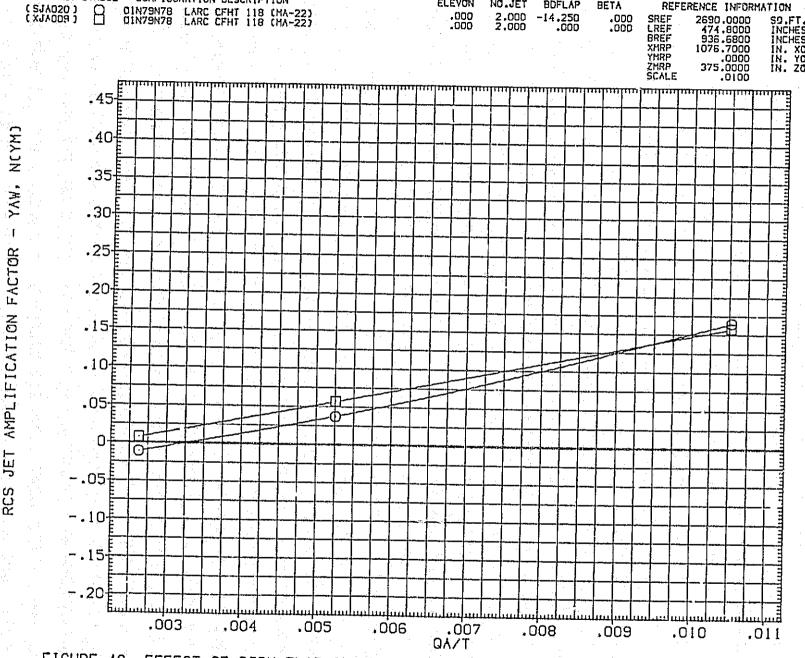


FIGURE 46. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N79N78

(B)ALPHA = .00

PAGE 798



ELEVON

NO.JET

BDFLAP

BETA

799

DATA SET SYMBOL CONFIGURATION DESCRIPTION

FIGURE 46. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N79N78 (C)ALPHA = 10.00PAGE

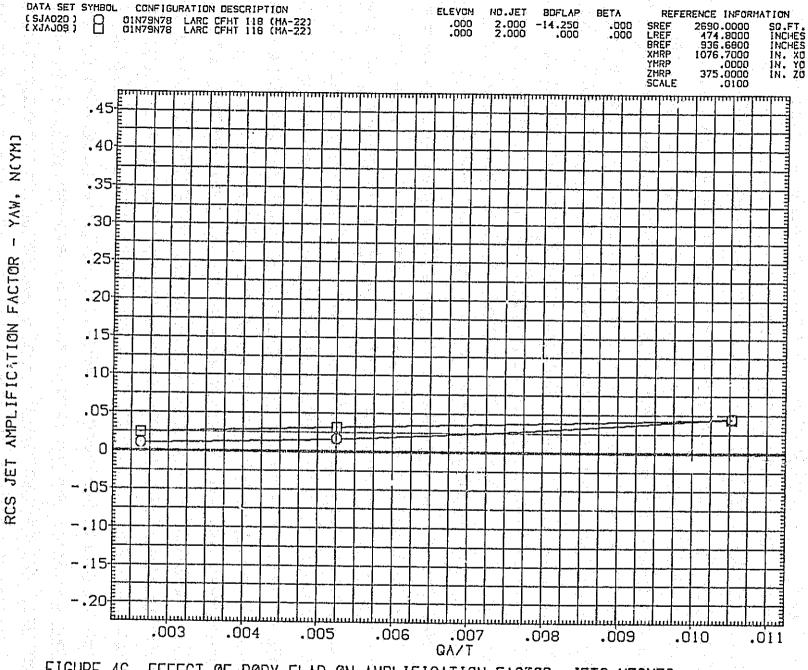


FIGURE 46. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N79N78

CDJALPHA = 20.00

PAGE 800

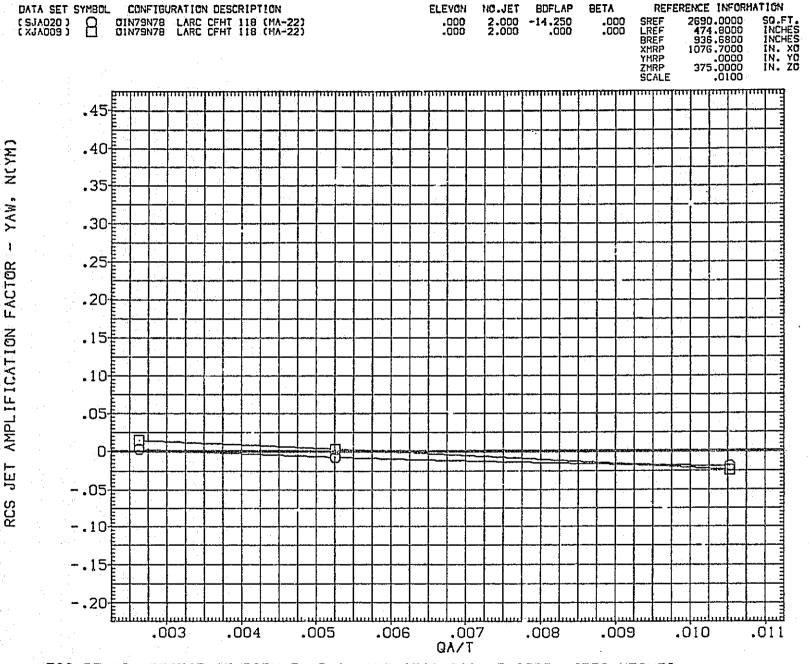
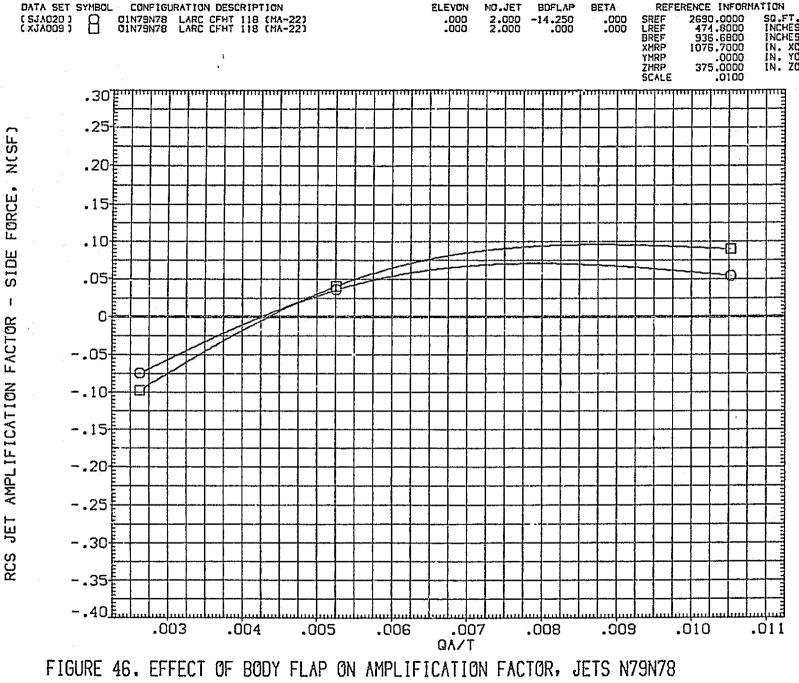


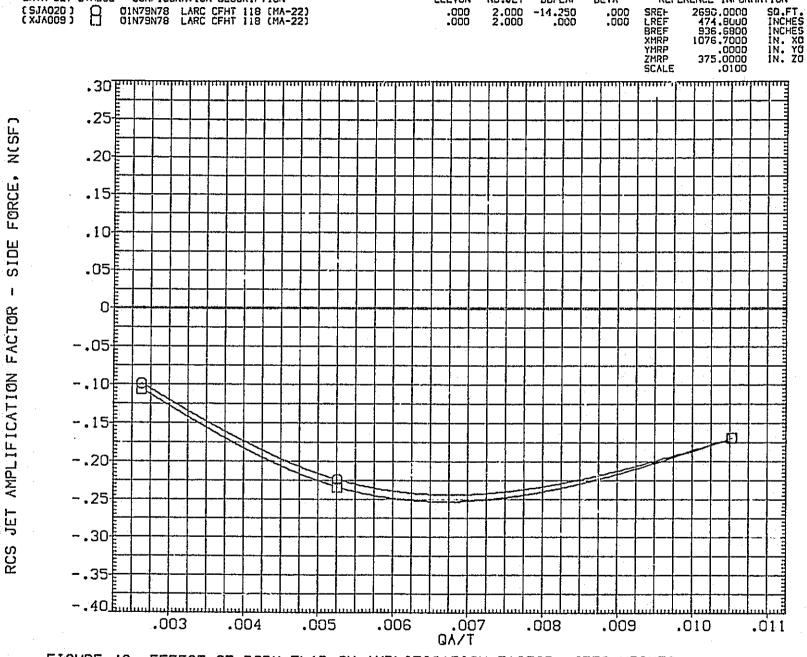
FIGURE 46. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N79N78

(E)ALPHA = 35.00

PAGE



PAGE 802 (A)ALPHA = -8.00



BOFLAP

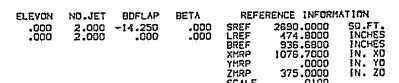
REFERENCE INFORMATION

DATA SET SYMBOL CONFIGURATION DESCRIPTION

FIGURE 46. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N79N78

(B)ALPHA = .00

PAGE 803



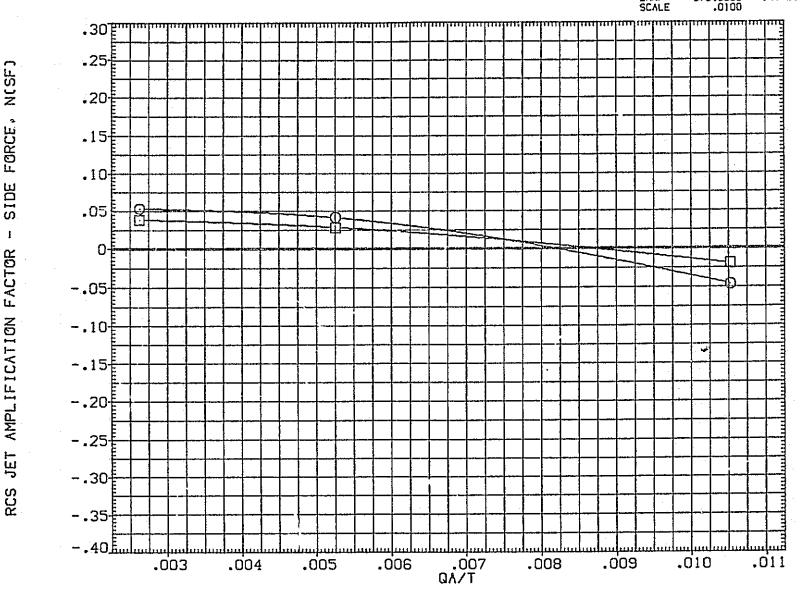


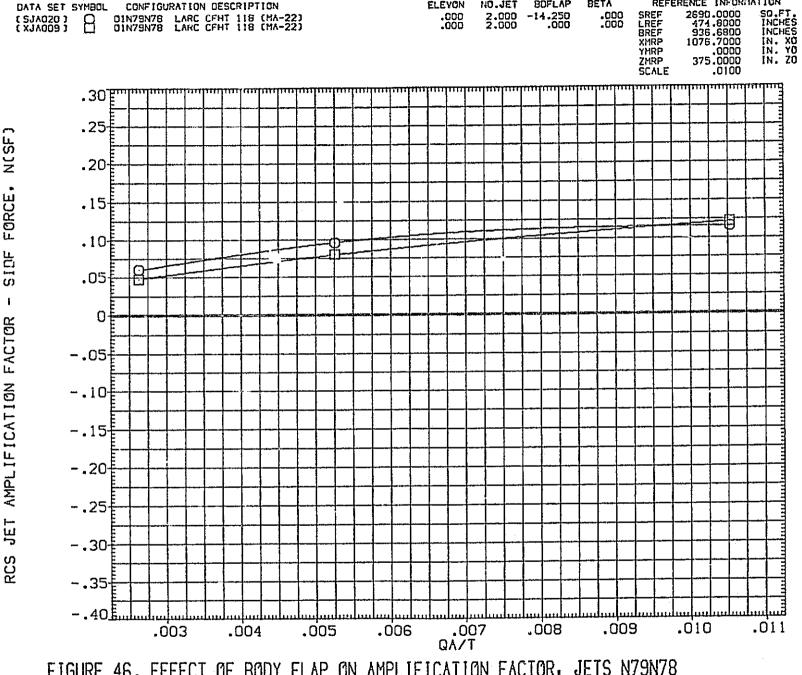
FIGURE 46. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N79N78

(C)ALPHA = 10.00 PAGE 804

DATA SET SYMBOL CONFIGURATION DESCRIPTION (SJA020) 01N79N78 LARC CFHT 118 (MA-22) 01N79N78 LARC CFHT 118 (MA-22) NO.JET BDFLAP BETA REFERENCE INFORMATION 2.000 .000 2690.0000 474.8000 936.6800 1076.7000 SO.FT. INCHES INCHES IN. XO IN. YO IN. ZO SREF LREF BREF XMRP YHRP ZHRP SCALE ·30£... 375,0000 0100 N(SF) .25 .20E FORCE, .15£ •10€ SIDE .05[JET AMPLIFICATION FACTOR 0‡ -.05[-.10 ~.15₽ -.20 -.25 -.30# RCS -.35[- .40焦. .003 004 .005 .006 .007 QA/T .008 FIGURE 46. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N79N78 .009 .010 .011

(D)ALPHA =

PAGE 805

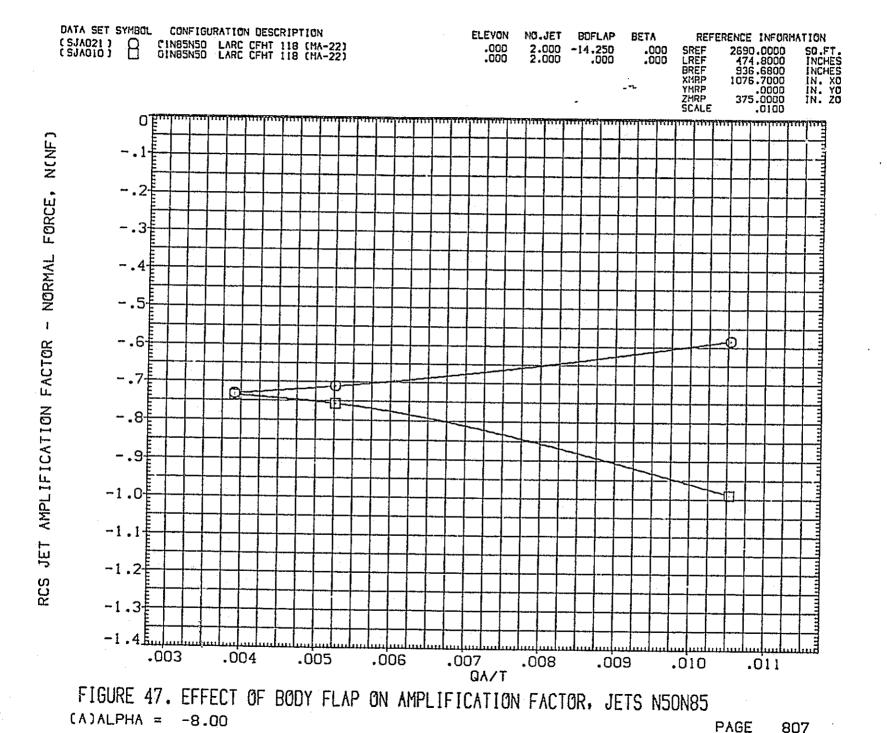


ELEYON

REFERENCE INFORMATION

BETA

FIGURE 46. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N79N78 PAGE 808 (E)ALPHA = 35.00



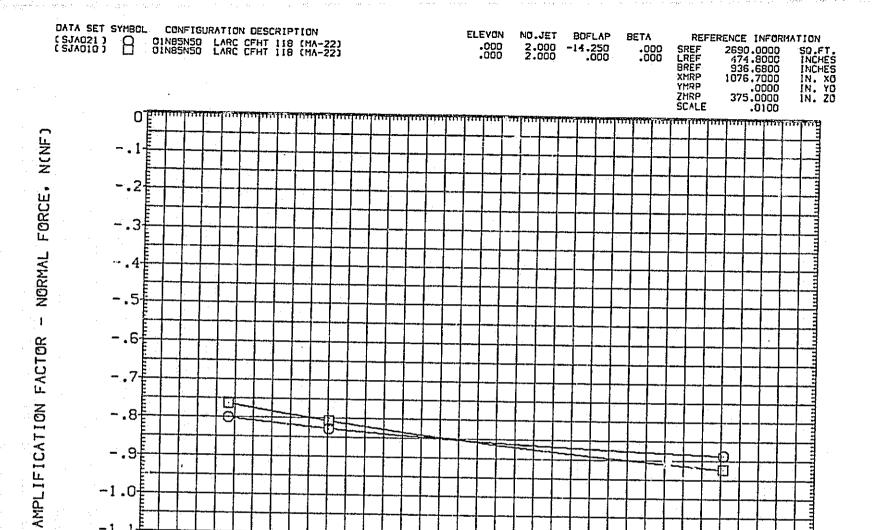


FIGURE 47. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N50N85 (B)ALPHA = PAGE 808

.007

QA/T

.008

eoo.

.010

.011

.006

-1.1-

-1.2[

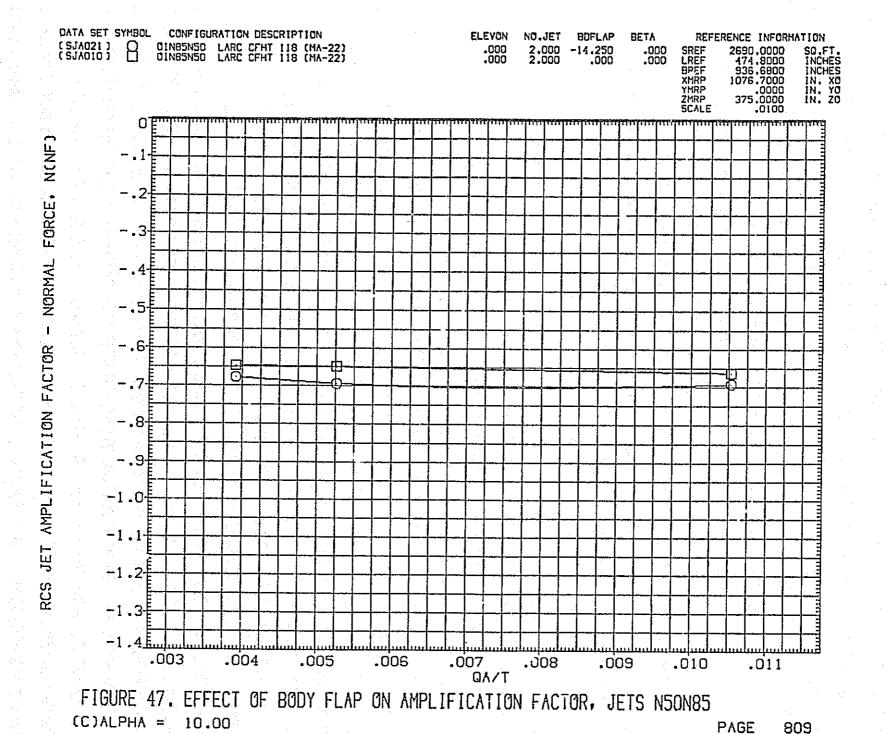
-1.3[

.003

.004

.005

JET



N(NF)

FORCE,

NORMAL

FACTOR

JET

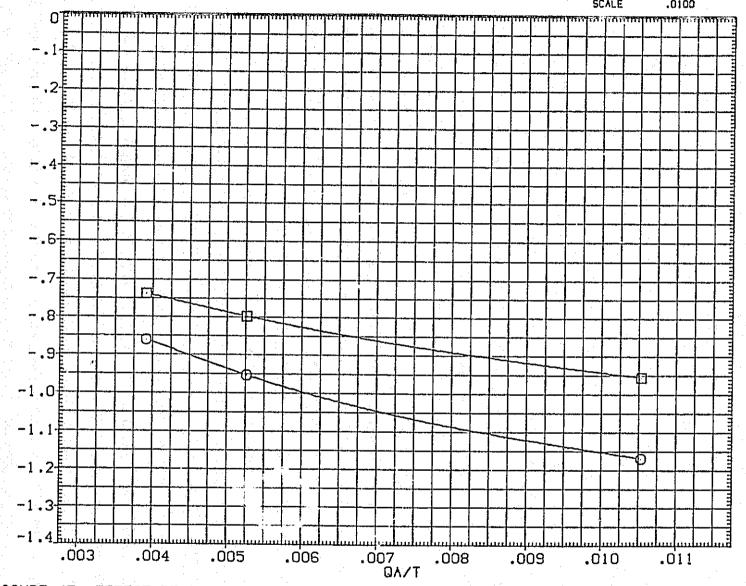


FIGURE 47. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N50N85

EDDALPHA = 20.00

PAGE

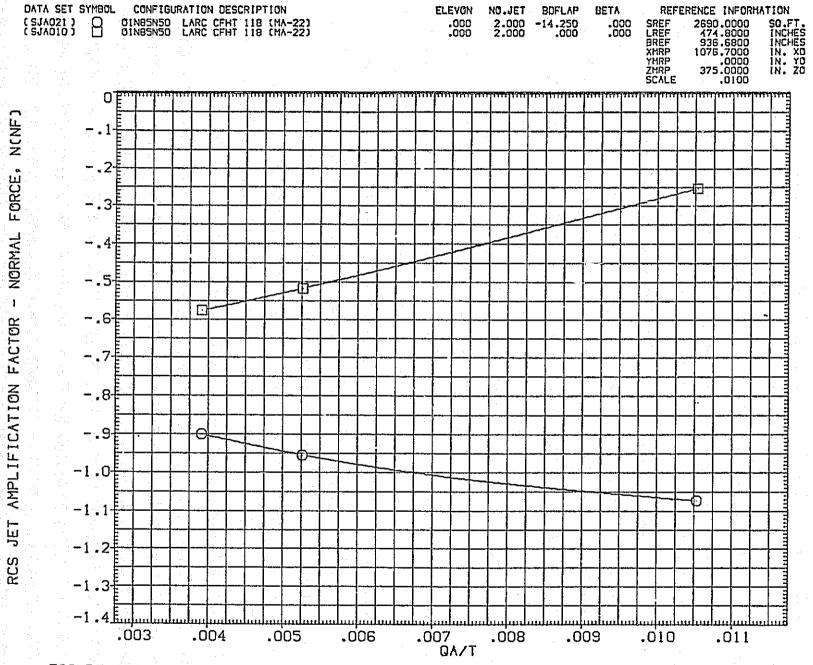


FIGURE 47. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N50N85

(E)ALPHA = 35.00

PAGE

PITCH,

FACTOR

REFERENCE INFORMATION 2690.0000 474.8000 936.6800 1076.7000 .0000 375.0000 SREF LREF BREF XMRP YMRP ZMAP SCALE

INCHES IN. XD IN. YO IN. ZO

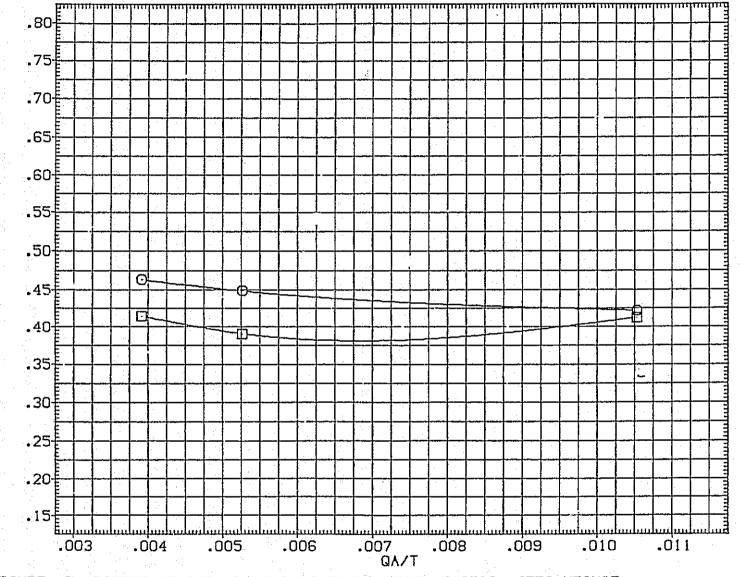


FIGURE 47. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N50N85 [A]ALPHA = -8.00PAGE 812

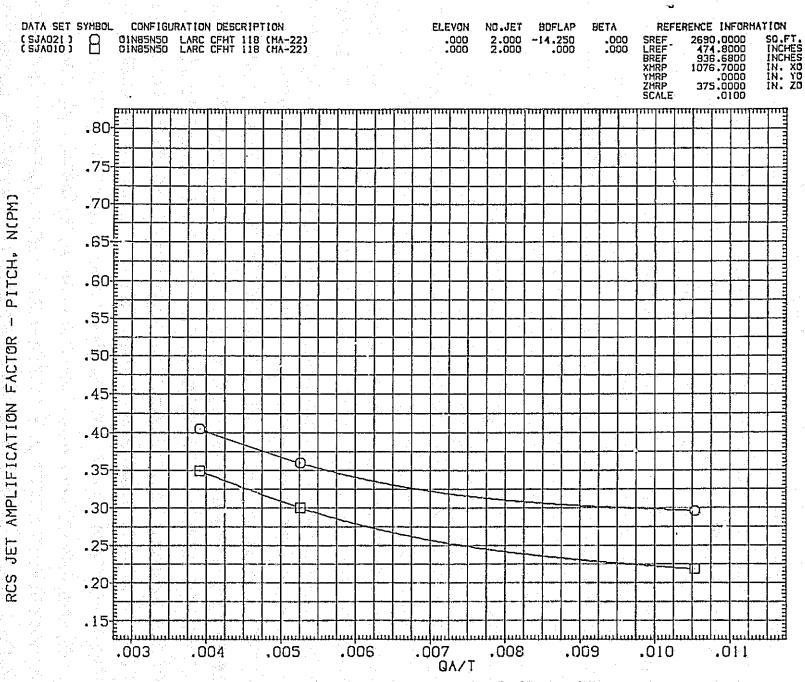


FIGURE 47. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N50N85

(B) ALPHA = .00

PAGE

PITCH,

AMPLIFICATION FACTOR

JET

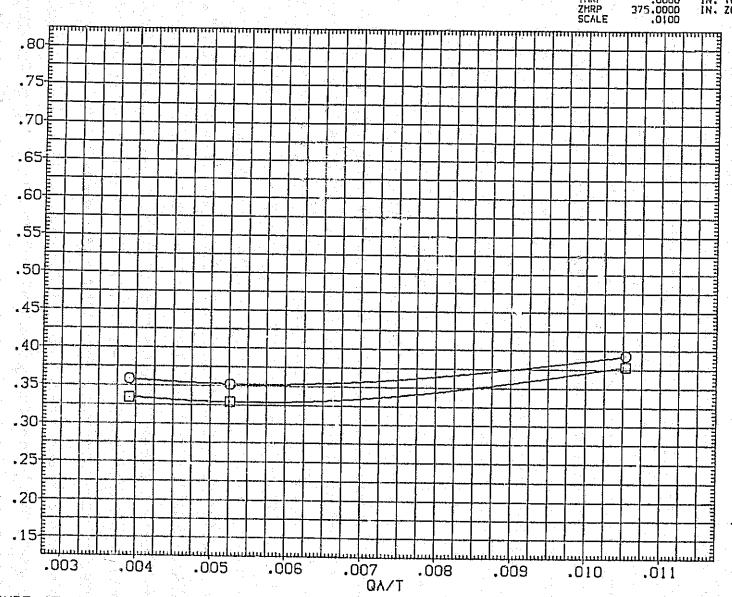


FIGURE 47. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N50N85

(C)ALPHA = 10.00

PAGE



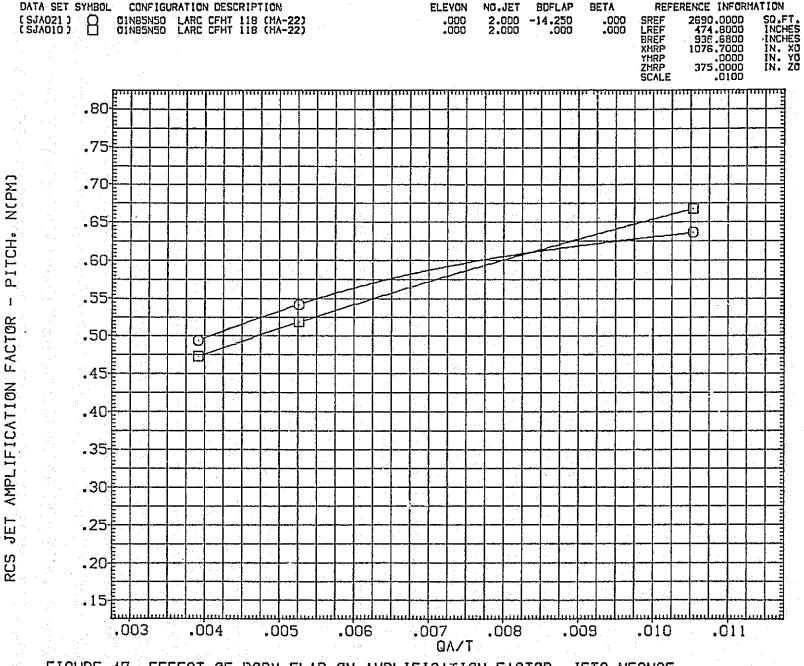


FIGURE 47. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N50N85

CD) ALPHA = 20.00

PAGE

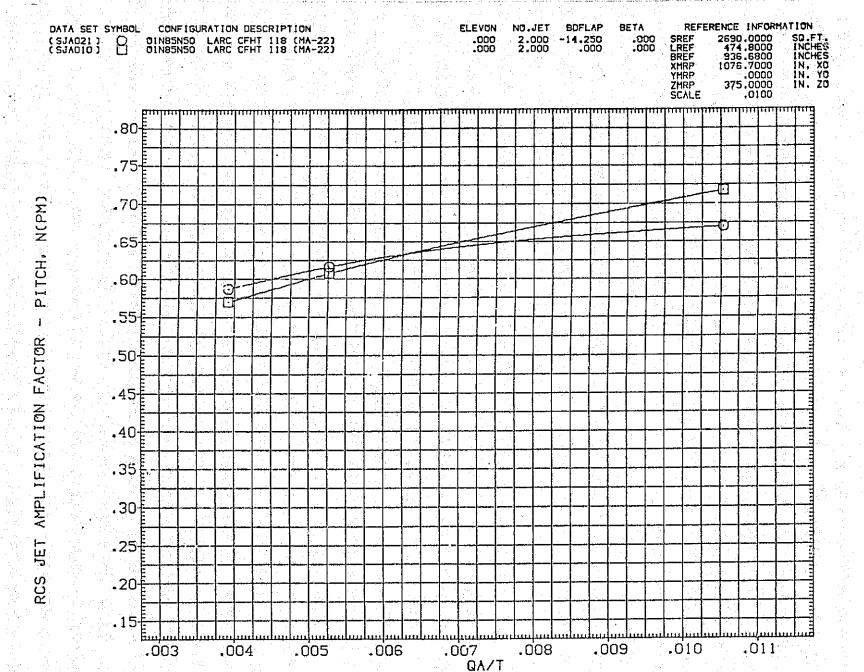


FIGURE 47. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N50N85

(E)ALPHA = 35.00 PAGE 816

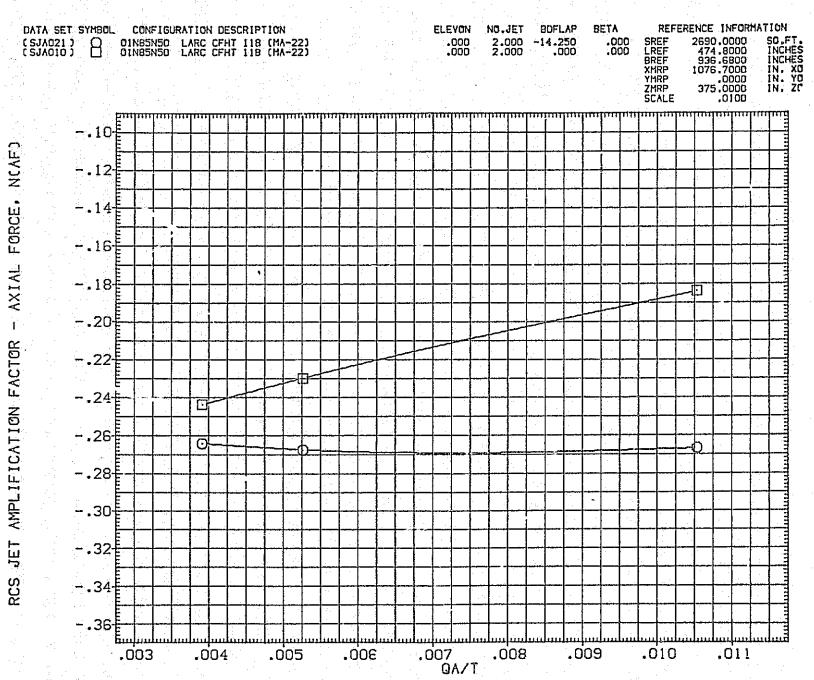


FIGURE 47. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N50N85

PAGE

N(AF)

FORCE,

AXIAL

AMPLIFICATION FACTOR

JET

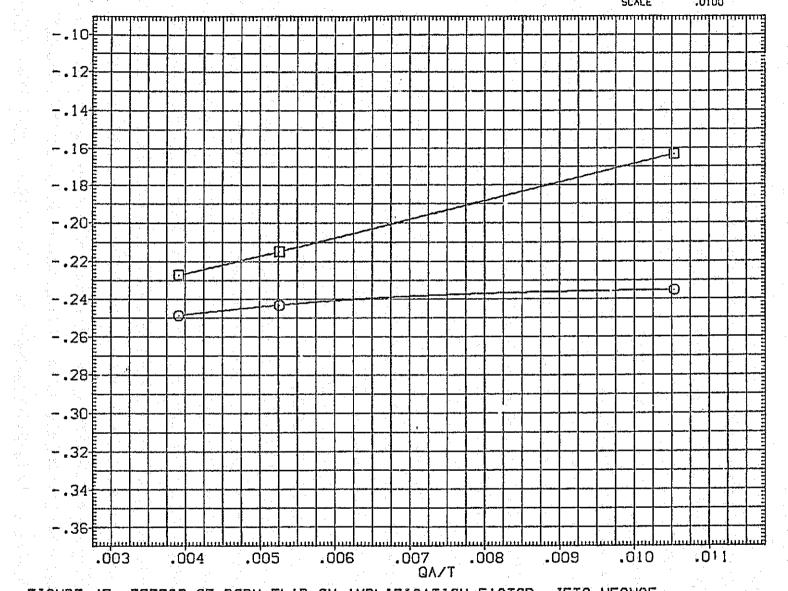


FIGURE 47. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N50N85

(B)ALPHA = .00

PAGE 818

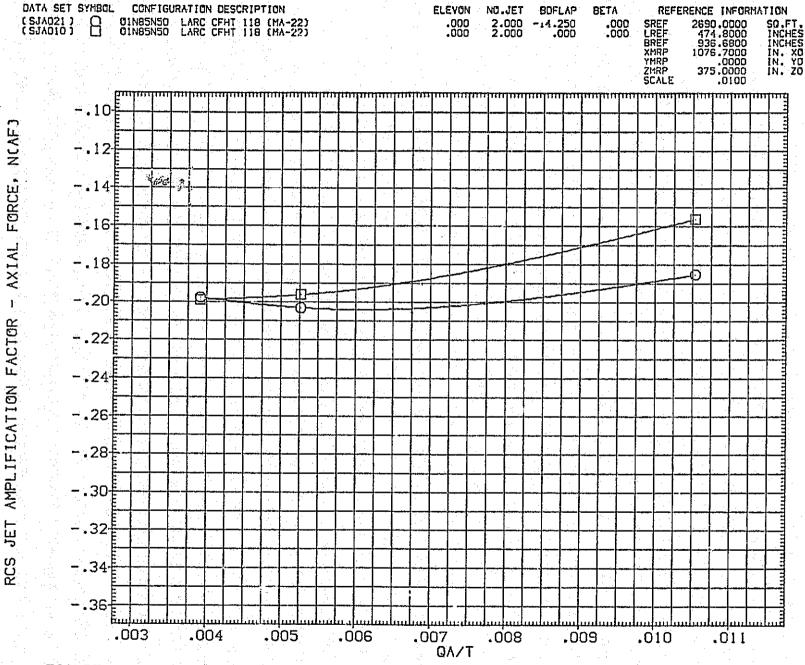


FIGURE 47. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N50N85

(C)ALPHA = 10.00

PAGE

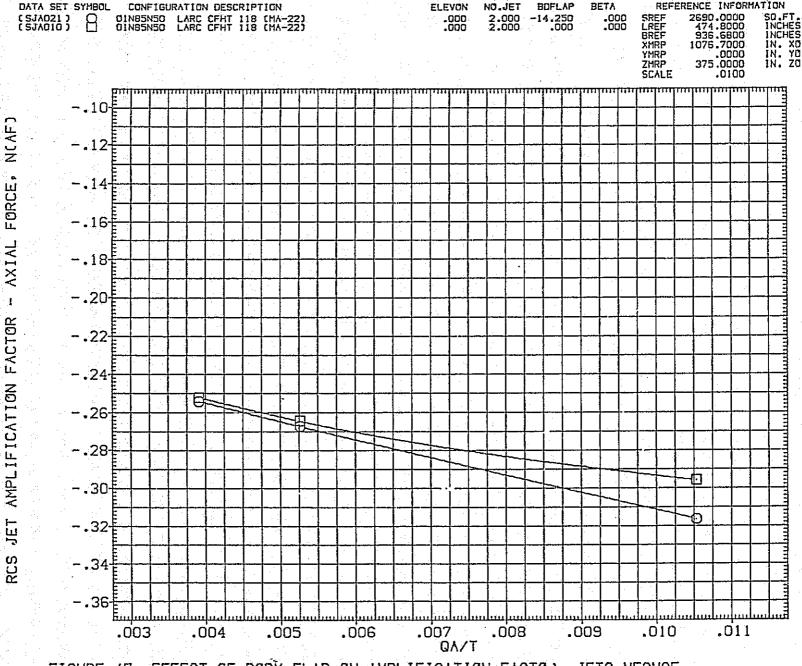


FIGURE 47. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N50N85

(D)ALPHA = 20.00

PAGE

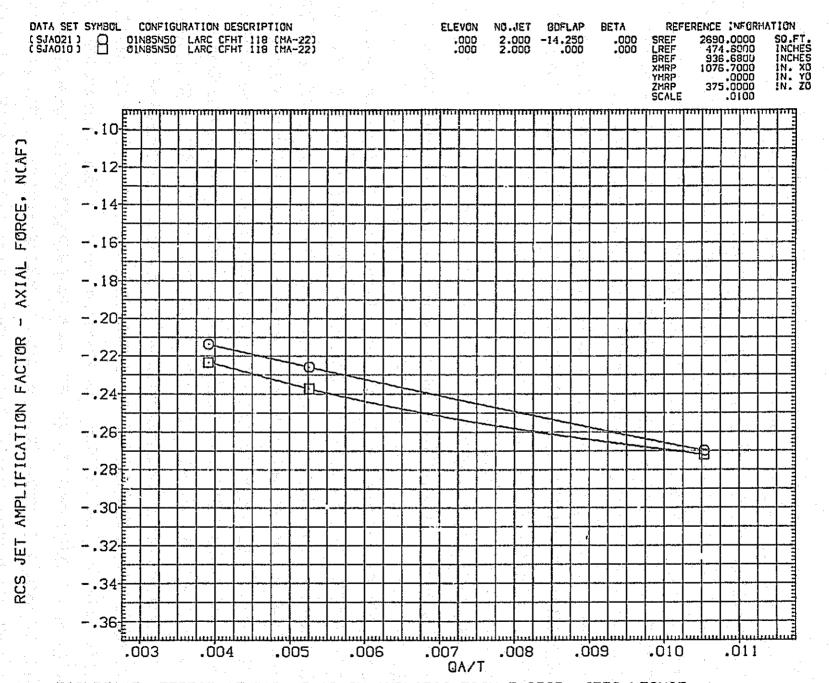
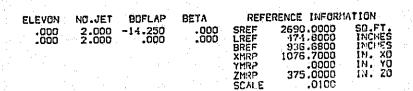


FIGURE 47. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N50N85

(E)ALPHA = 35.00

PAGE



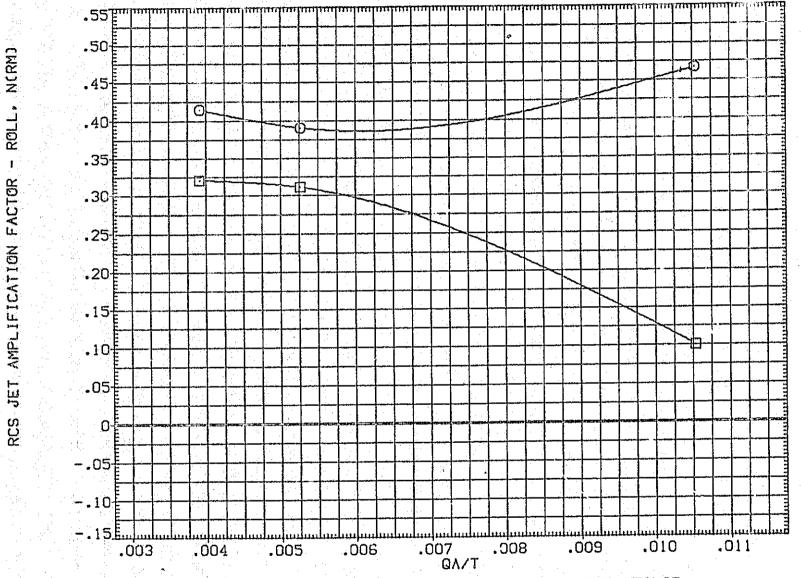


FIGURE 47. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N50N85

[A]ALPHA = -8.00

PAGE

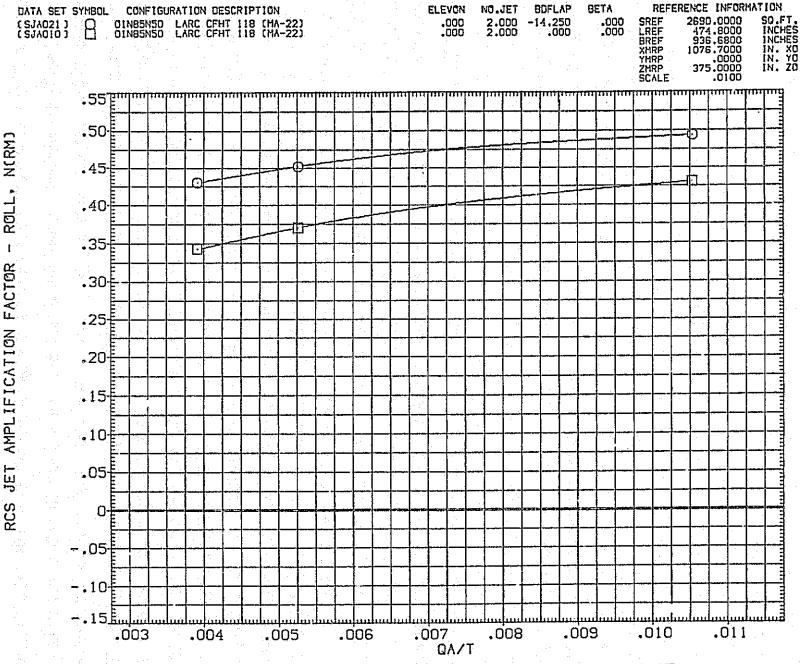


FIGURE 47. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N50N85

(B) ALPHA = .00

PAGE

DATA SET SYMBOL CONFIGURATION DESCRIPTION

REFERENCE INFURMATION

824

BOFLAP

RETA

FIGURE 47. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N50N85 PAGE (CJALPHA = 10.00

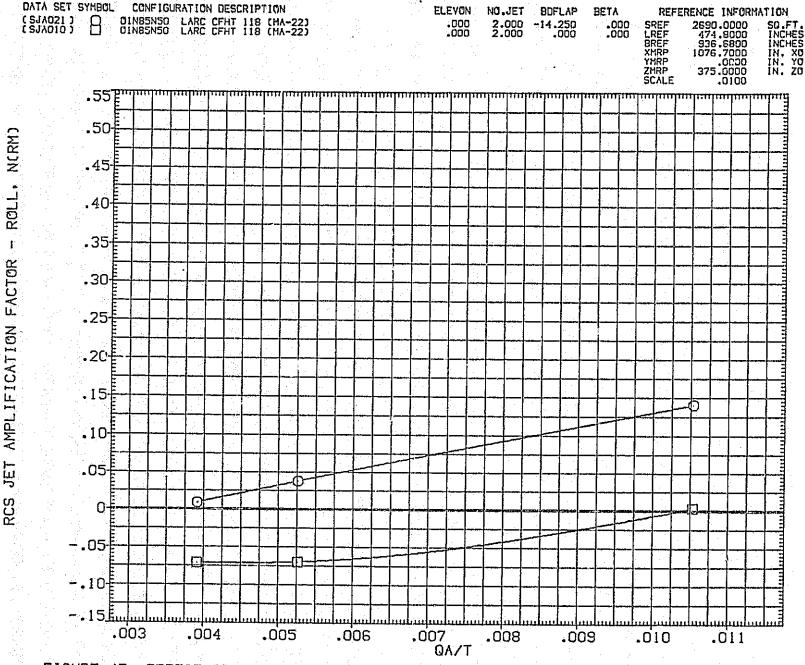


FIGURE 47. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N50N85

CD)ALPHA = 20.00

PAGE

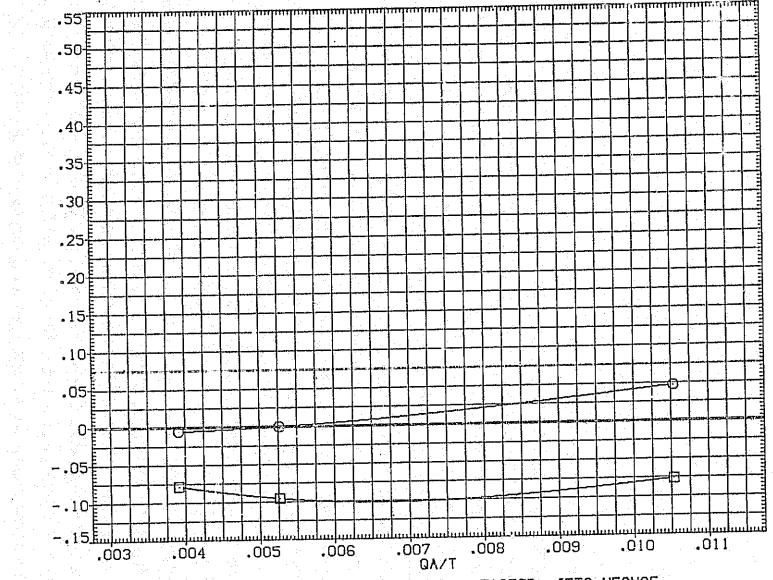


FIGURE 47. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N50N85

PAGE 826

g.

N(RM)

ROLL.

FACTOR

AMPL IFICATION

JET

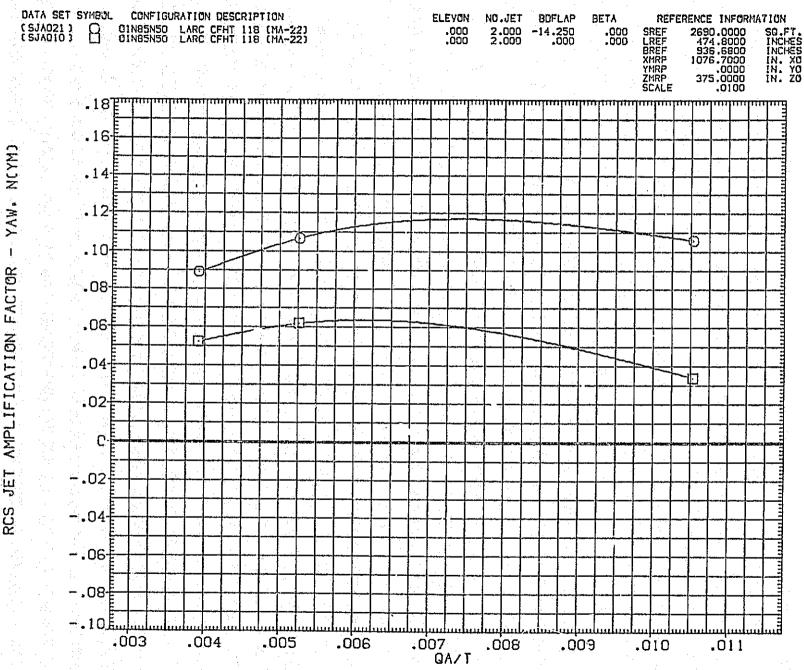


FIGURE 47. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N50N85

PAGE 827

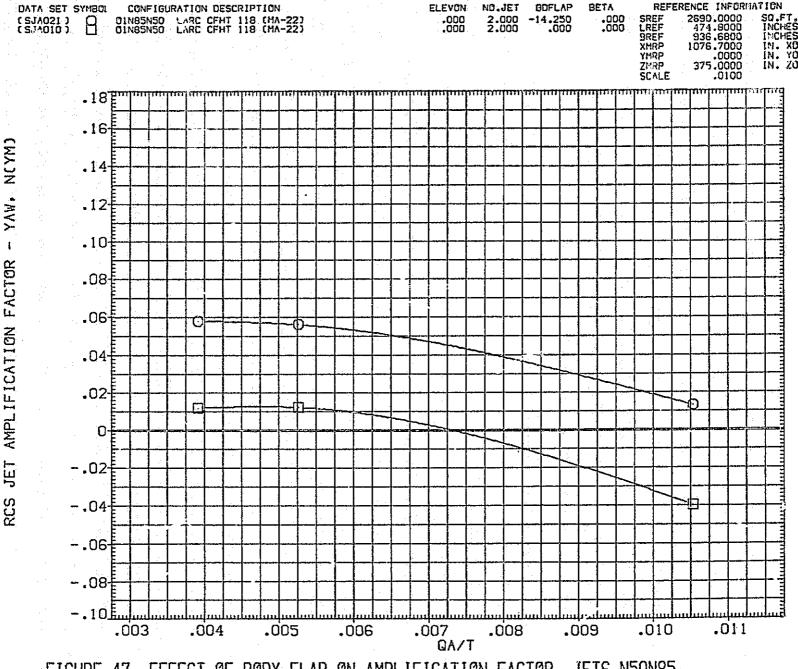


FIGURE 47. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N50N85

(B) ALPHA = .00

PAGE 828

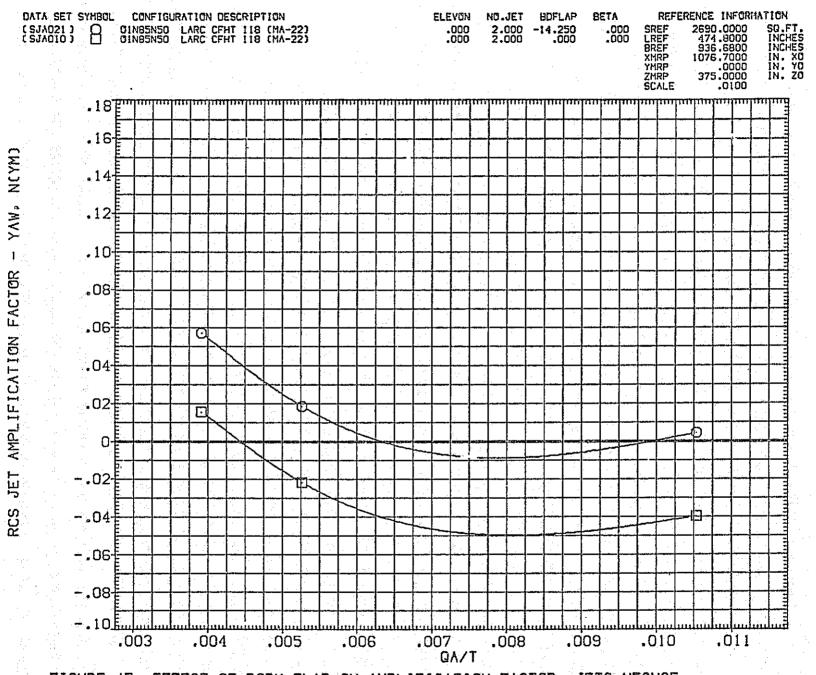


FIGURE 47. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N50N85

(C)ALPHA = 10.00

PAGE 829

FIGURE 47. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N50N85

(D)ALPHA = 20.00

PAGE 830

QA/T

()



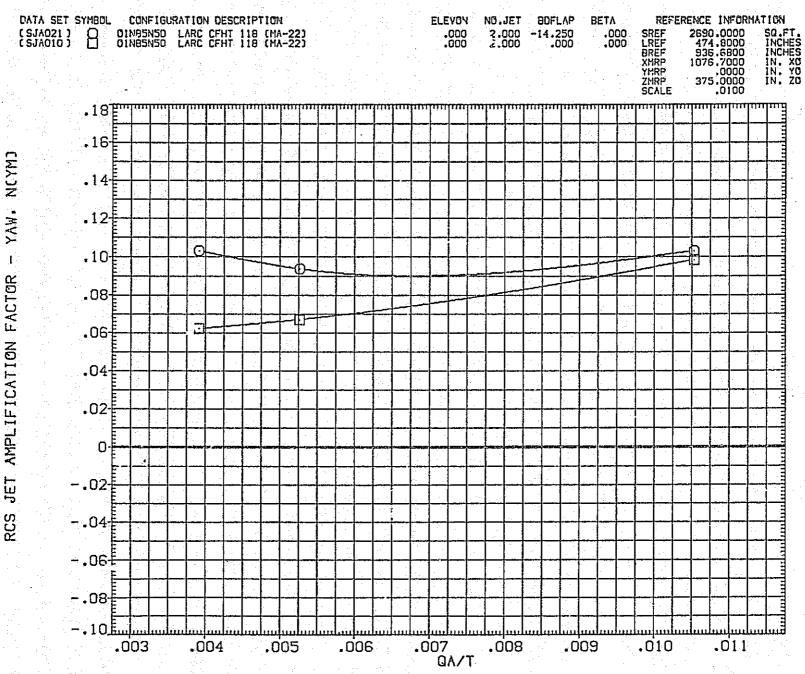


FIGURE 47. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N50N85

(E)ALPHA = 35.00

PAGE 831

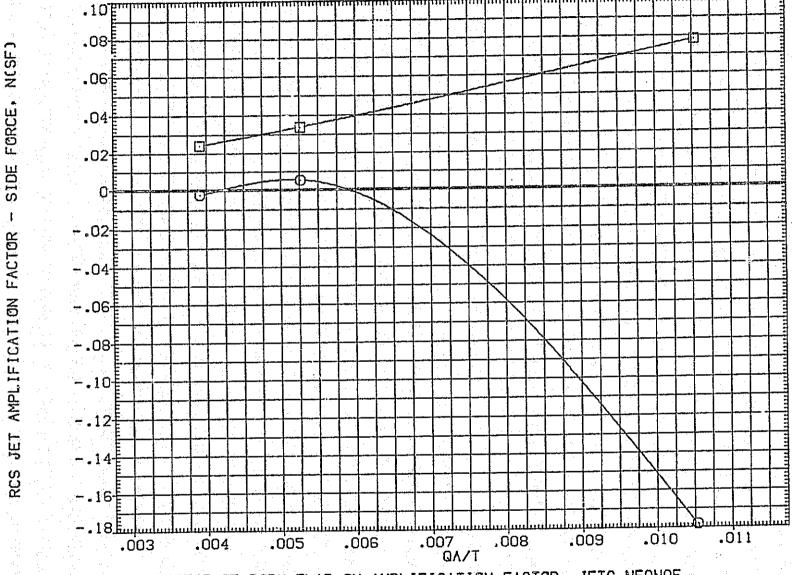


FIGURE 47. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N50N85

PAGE 832

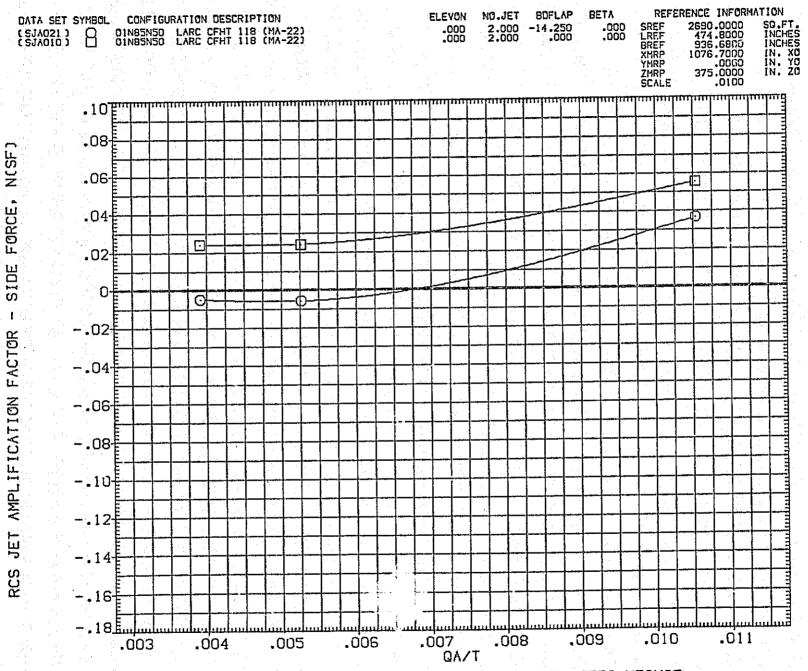


FIGURE 47. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N50N85

(B) ALPHA = .00

PAGE

FIGURE 47. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N50N85

(C)ALPHA = 10.00

PAGE

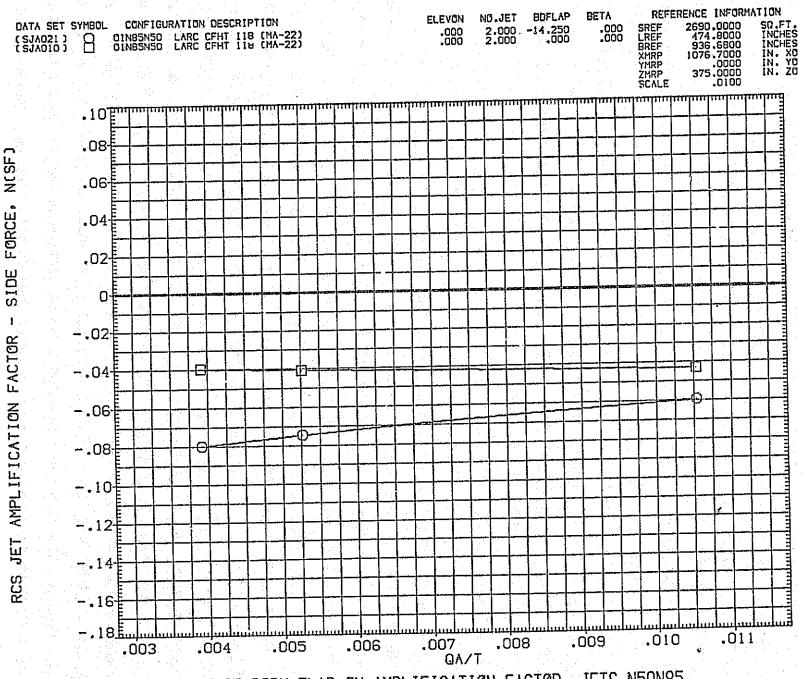


FIGURE 47. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N50N85

PAGE
PAGE

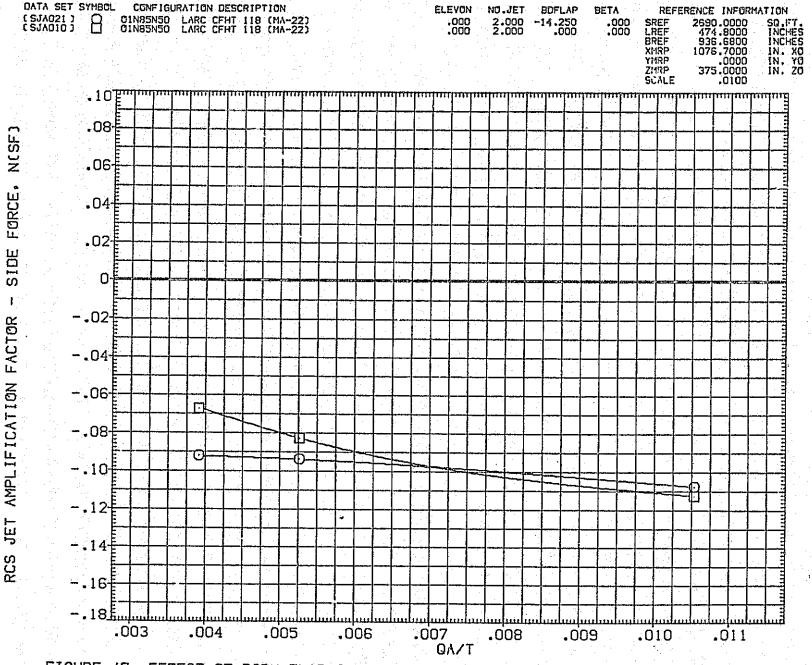


FIGURE 47. EFFECT OF BODY FLAP ON AMPLIFICATION FACTOR, JETS N50N85

(E)ALPHA = 35.00

PAGE 836

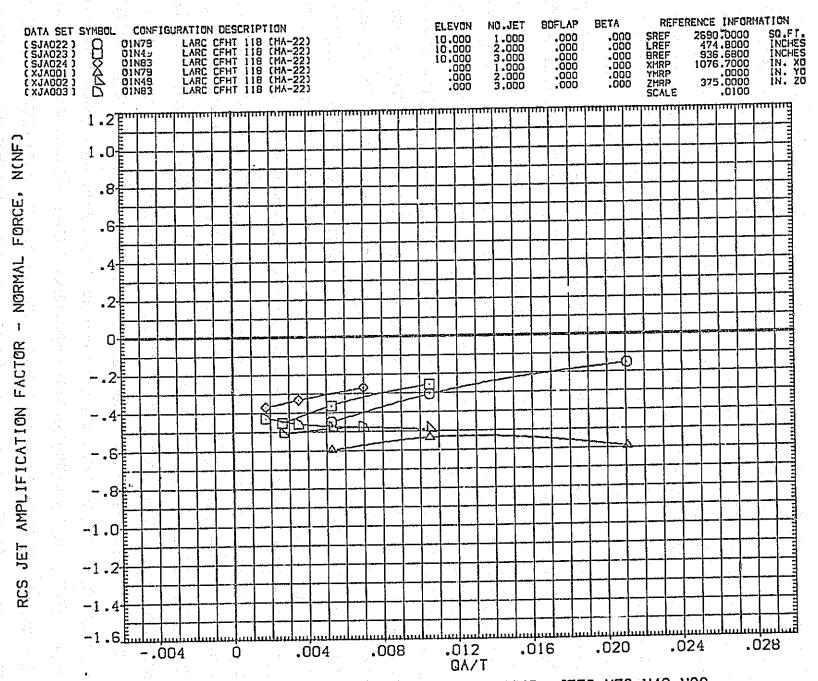


FIGURE 48. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79, N49, N83

PAGE 837

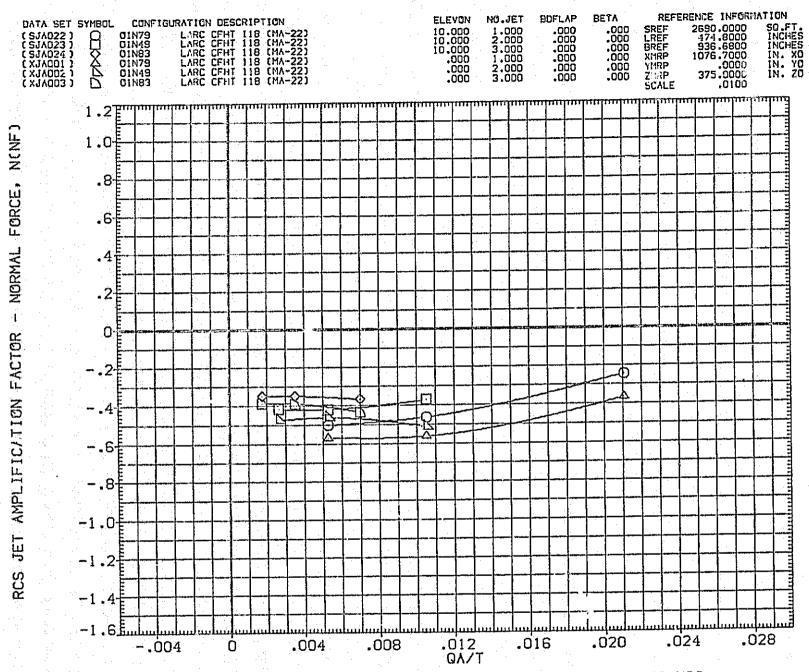


FIGURE 48. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79, N49, N83

PAGE 838

, and .

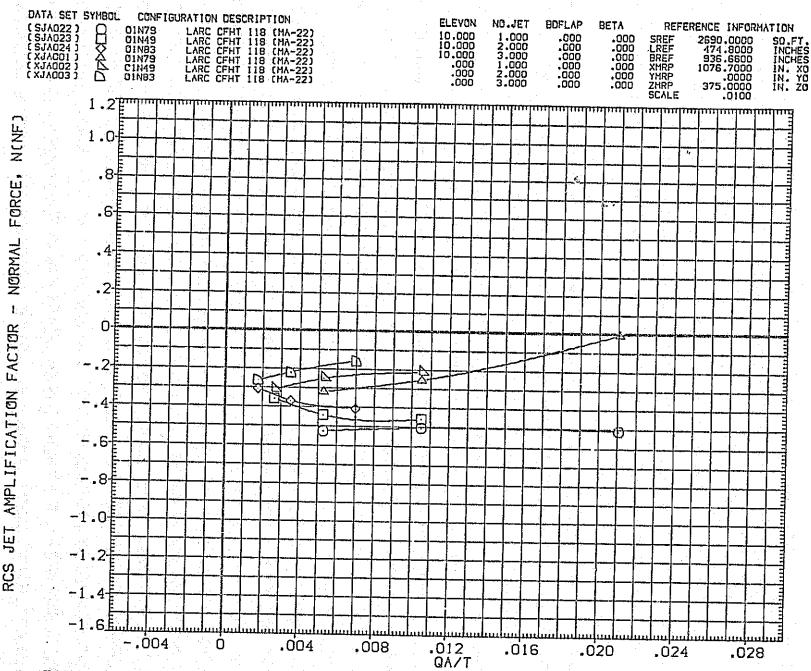


FIGURE 48. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79, N49, N83

COALPHA = 10.00

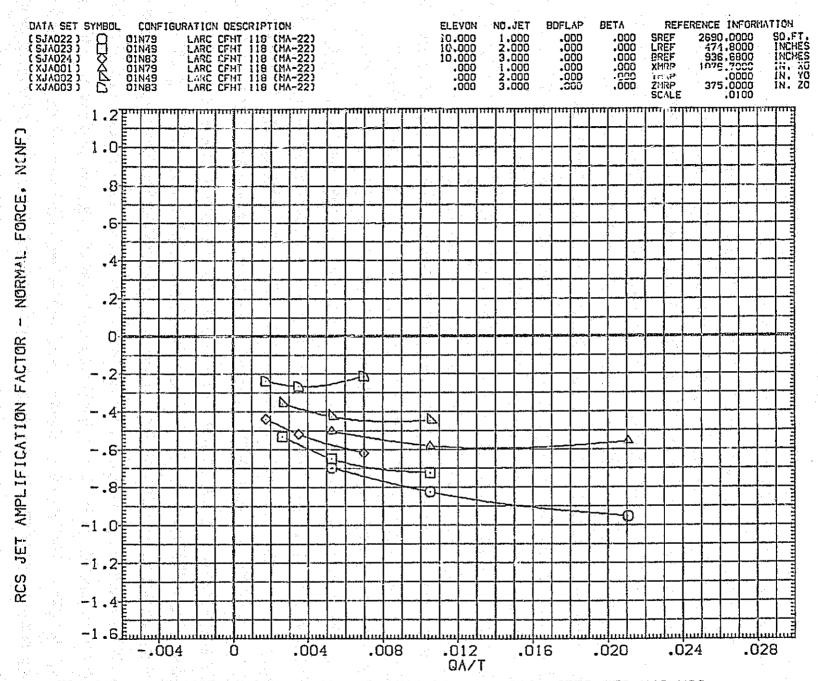


FIGURE 48. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79, N49, N83

(D)ALPHA = 20.00

PAGE 840

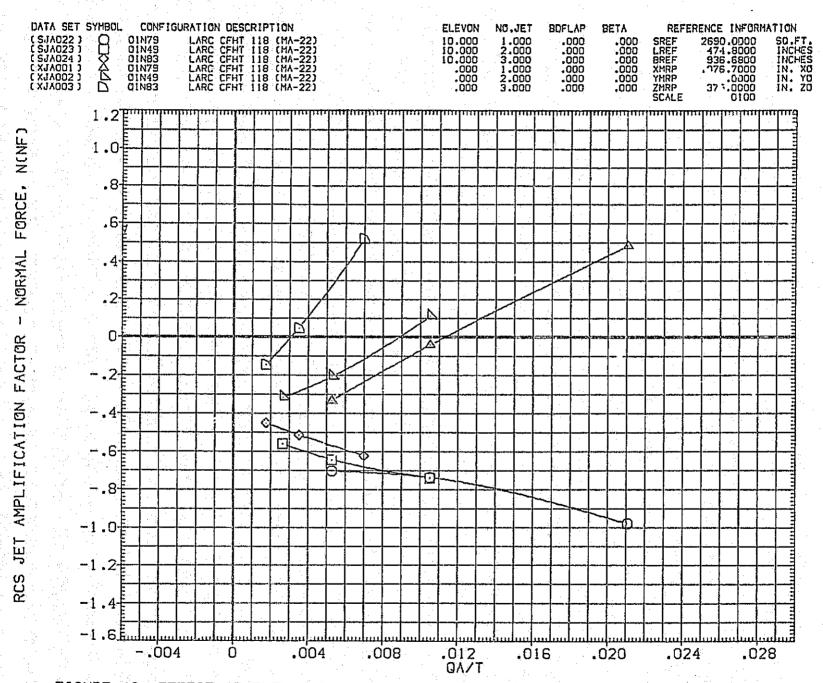


FIGURE 48. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79, N49, N83

(E)ALPHA = 35.00

PAGE 841

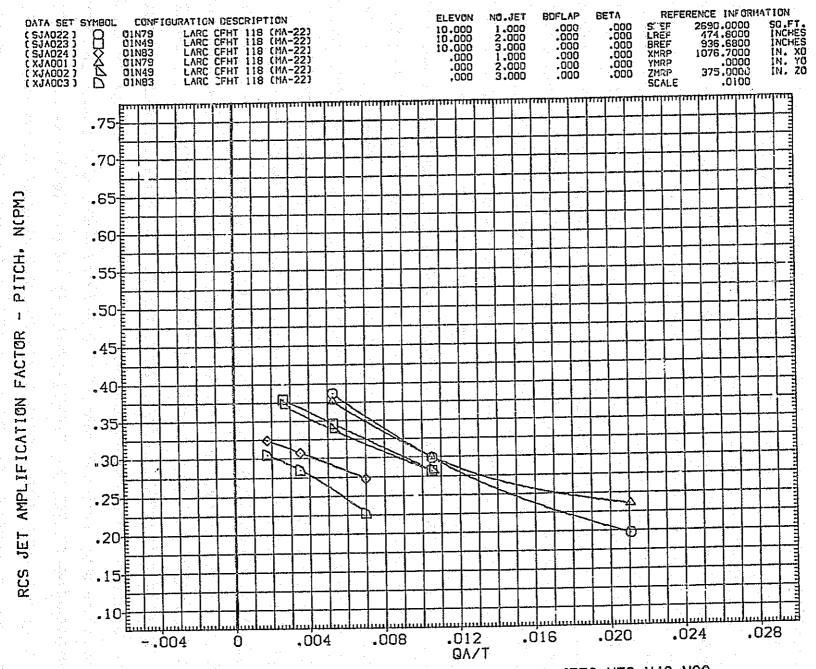


FIGURE 48. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79, N49, N83

PAGE 842

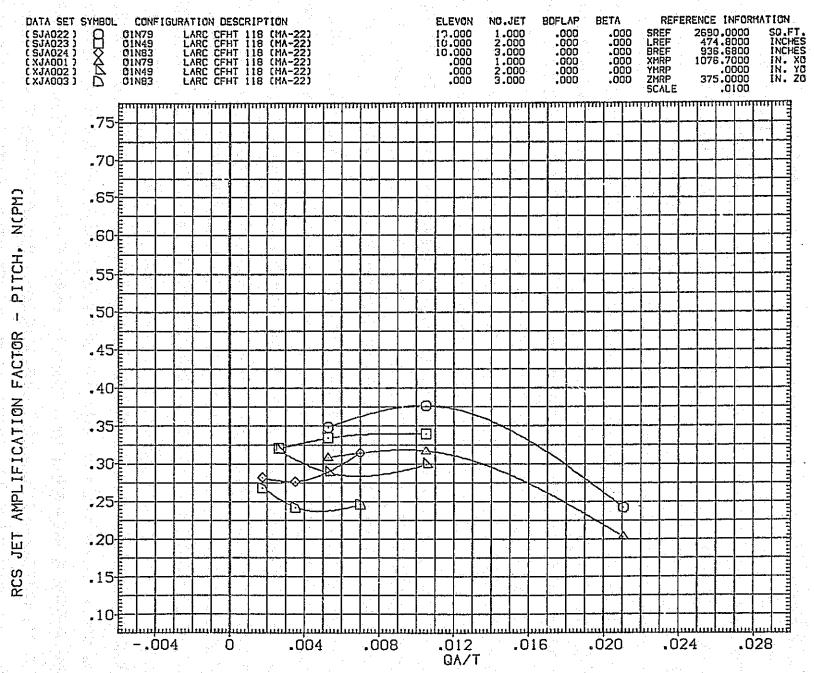


FIGURE 48. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79,N49,N83

(B) ALPHA = .00

PAGE 843

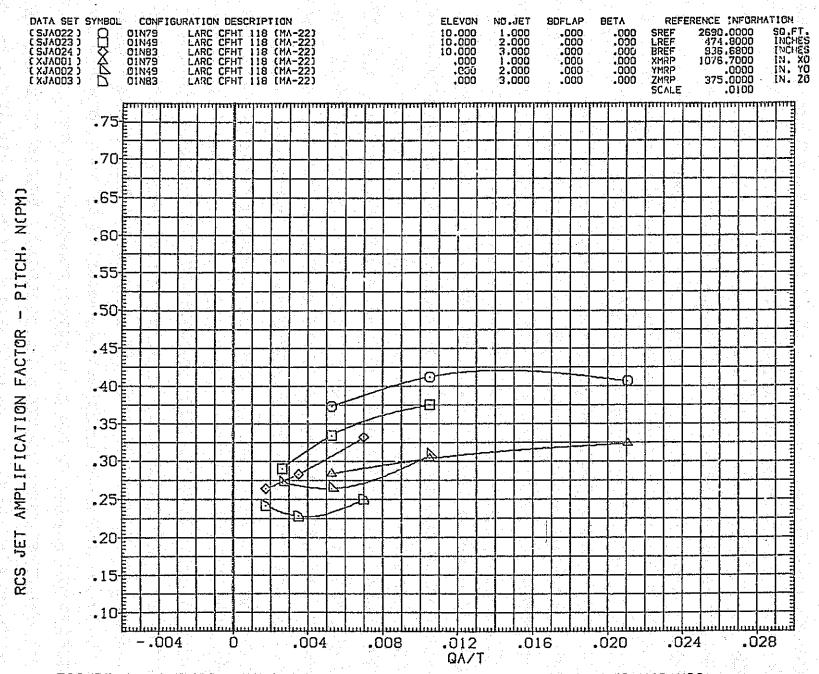


FIGURE 48. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79,N49,N83

(C)ALPHA = 10.00

PAGE 844

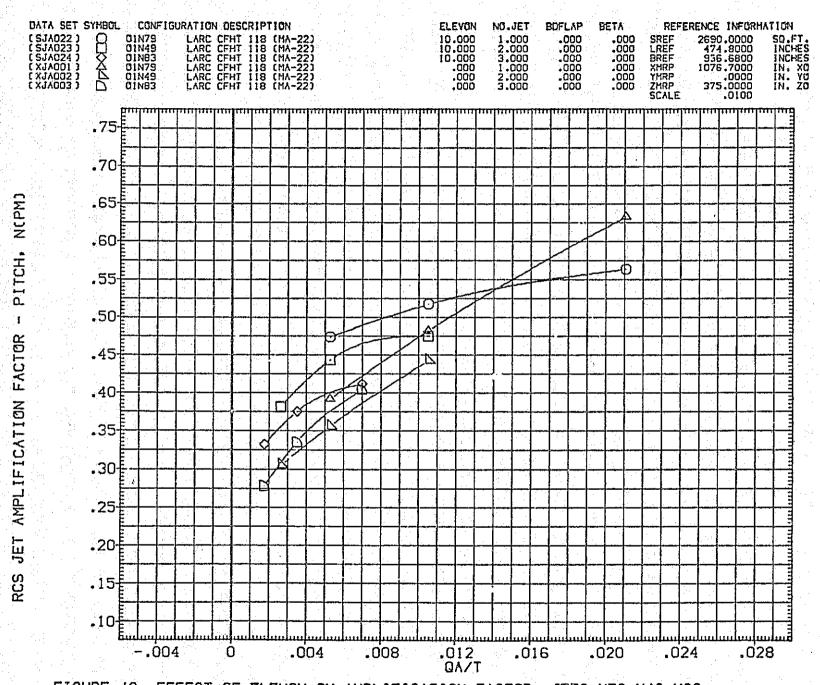


FIGURE 48. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79, N49, N83

(D)ALPHA = 20.00

PAGE 845

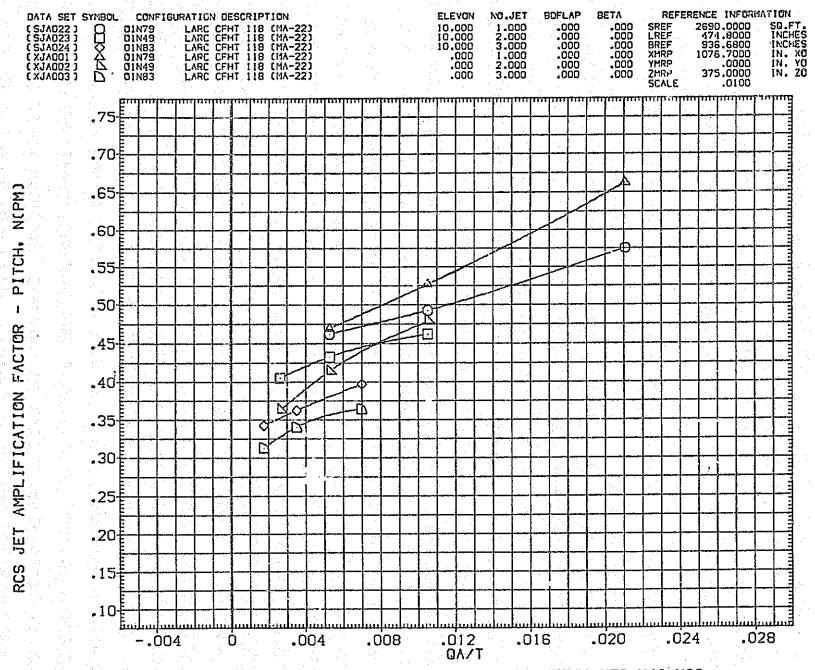


FIGURE 48. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79, N49, N83

(E) ALPHA = 35.00

PAGE 846

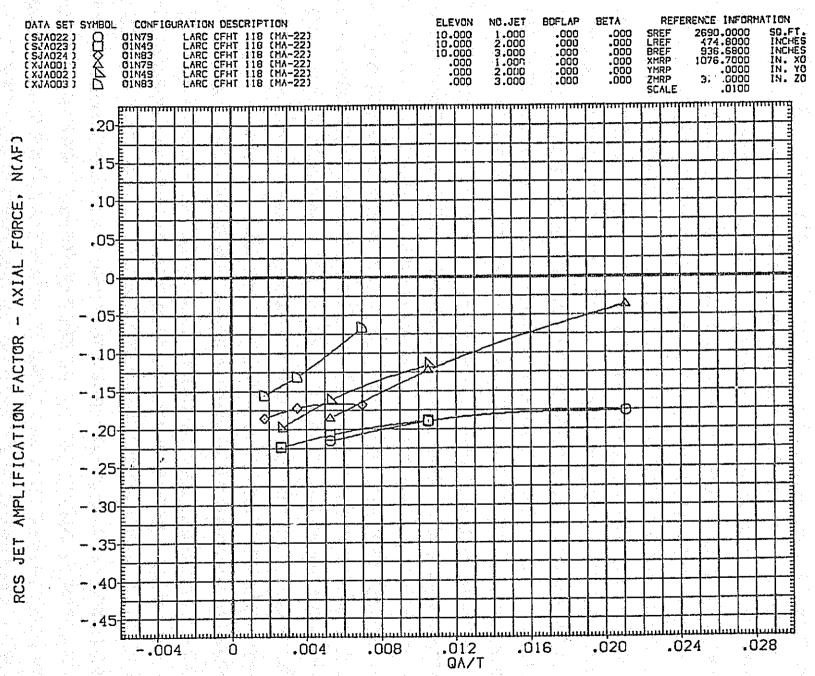


FIGURE 48. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79, N49, N83

(A)ALPHA = -8.00

PAGE 847

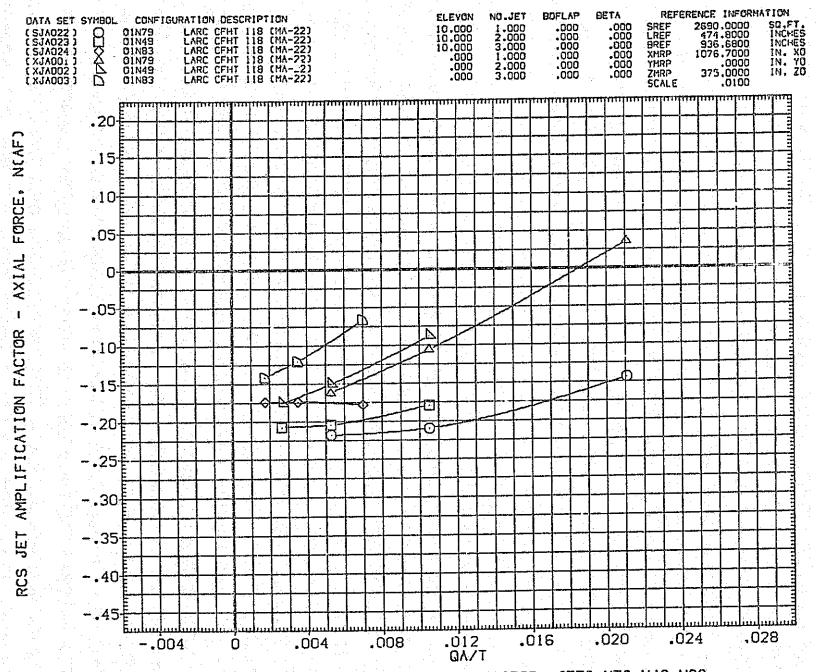


FIGURE 48. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79, N49, N83

CB) ALPHA = .00

PAGE 848

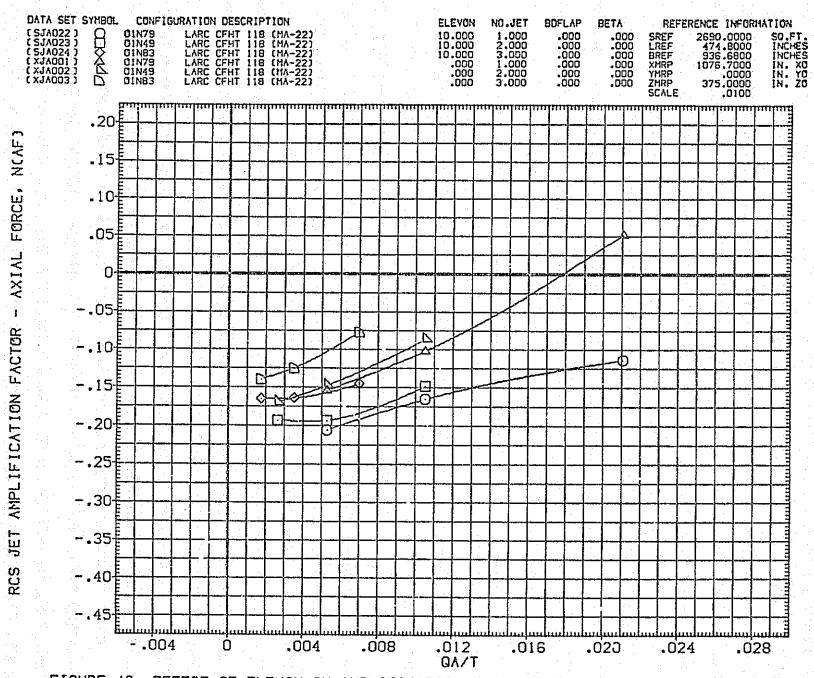


FIGURE 48. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79, N49, N83

(C) ALPHA = 10.00

PAGE 849

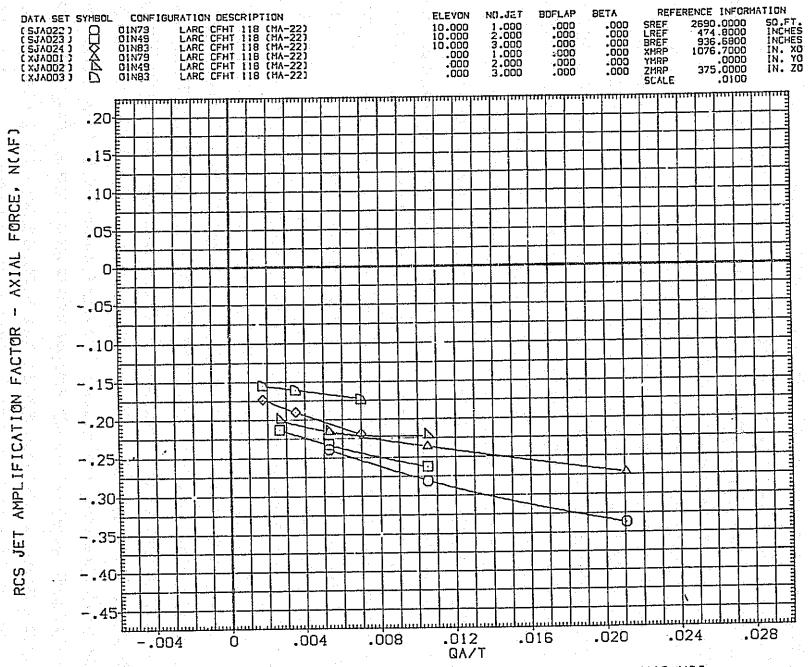


FIGURE 48. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79, N49, N83

CD) ALPHA = 20.00

PAGE 850

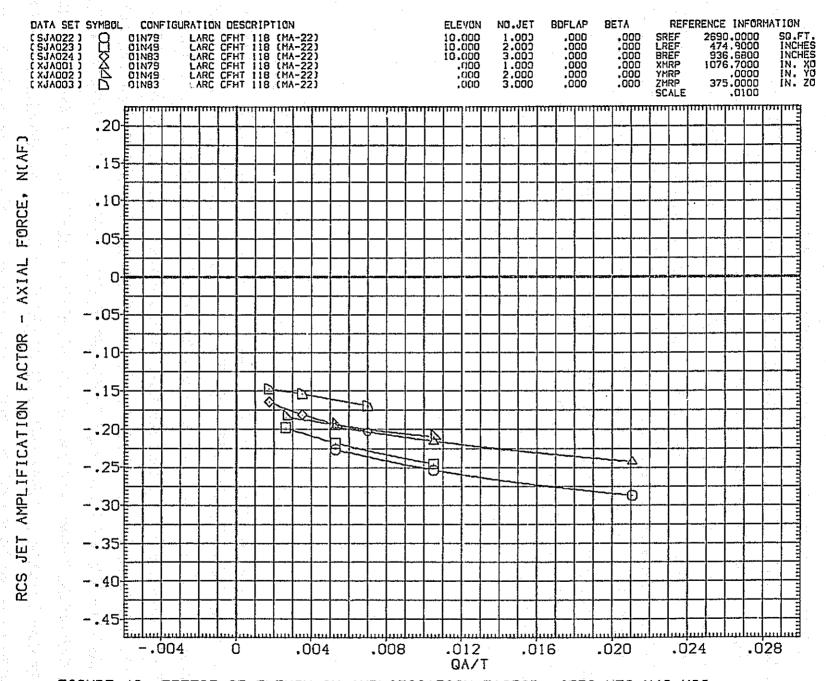


FIGURE 48. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79, N49, N83

(E)ALPHA = 35.00

PAGE 851

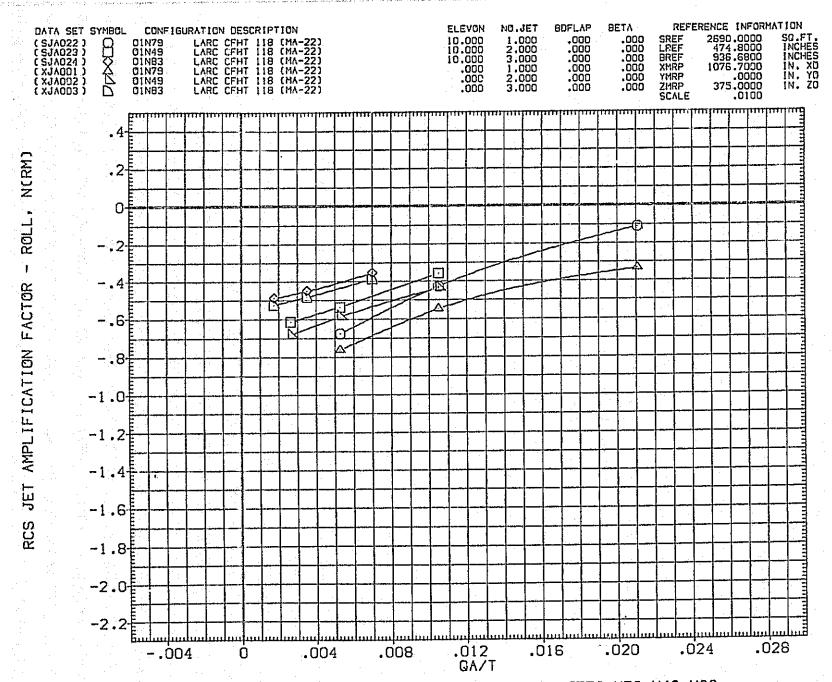


FIGURE 48. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79, N49, N83

(A)ALPHA = -8.00

PAGE 852

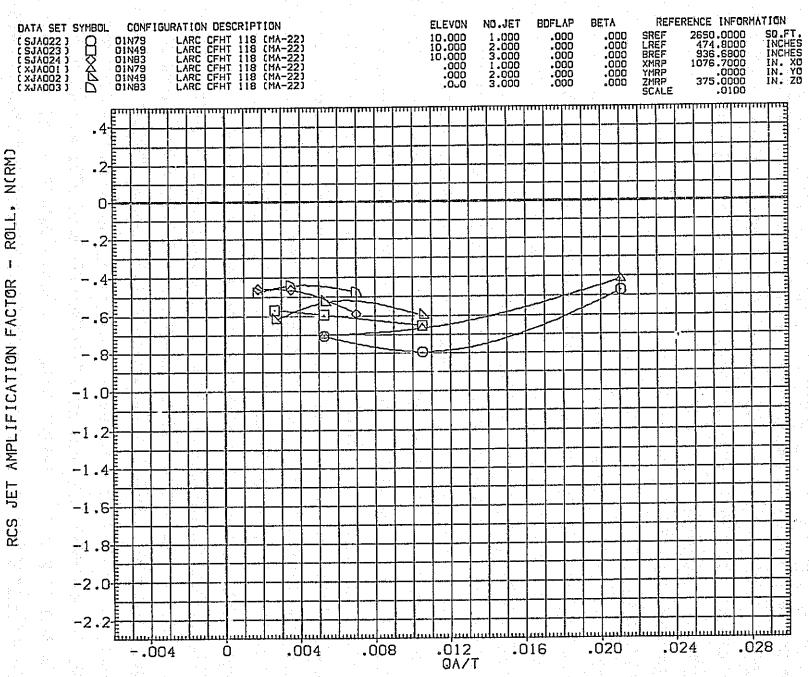


FIGURE 48. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79, N49, N83

(B) ALPHA = .00

PAGE 853

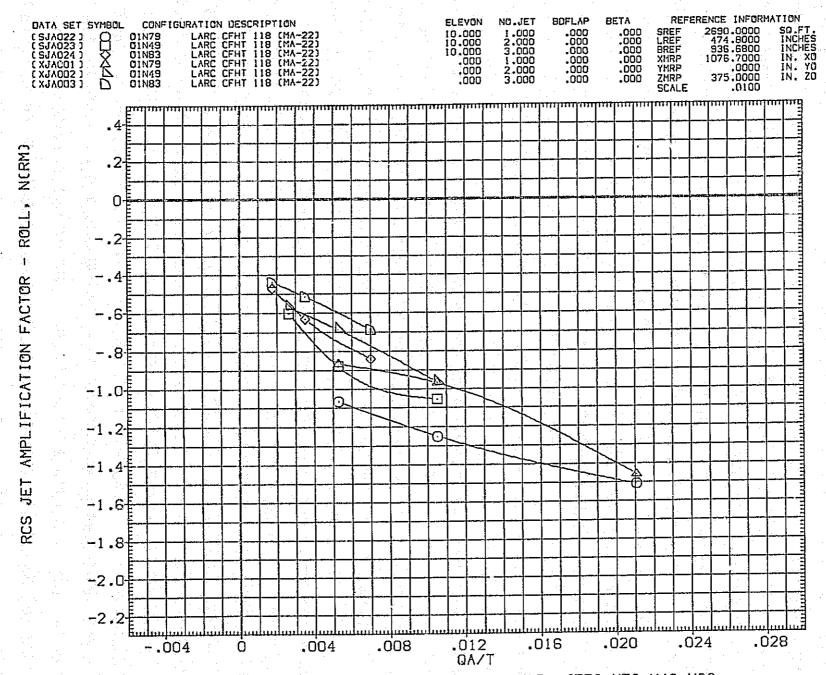


FIGURE 48. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79, N49, N83

(C)ALPHA = 10.00

PAGE 854

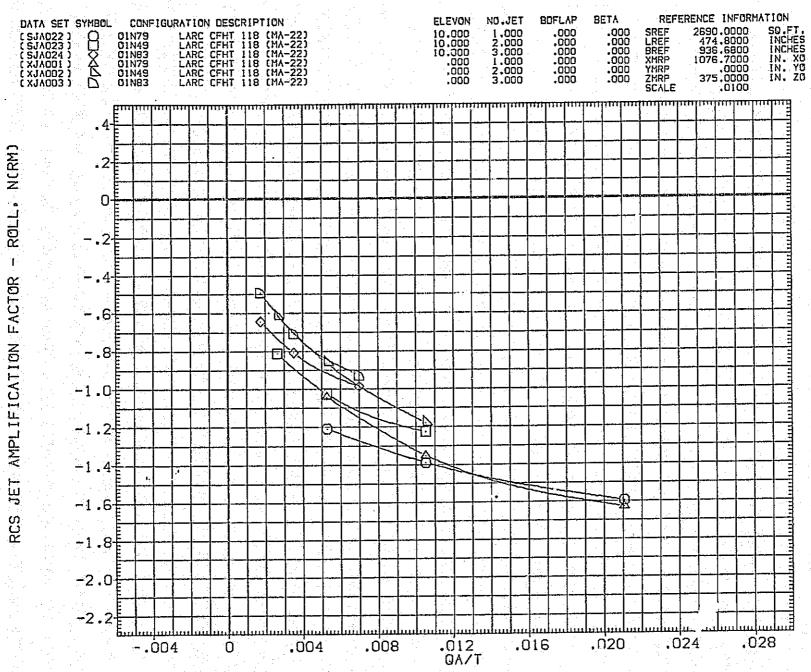


FIGURE 48, EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79, N49, N83

(D)ALPHA = 20.00

PAGE 855

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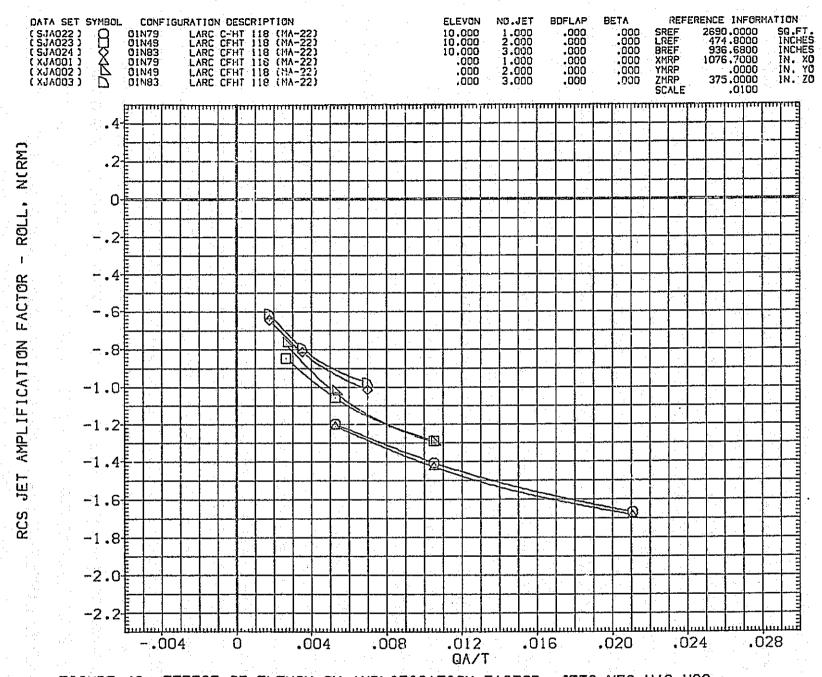


FIGURE 48. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79, N49, N83

CE)ALPHA = 35.00

PAGE 856



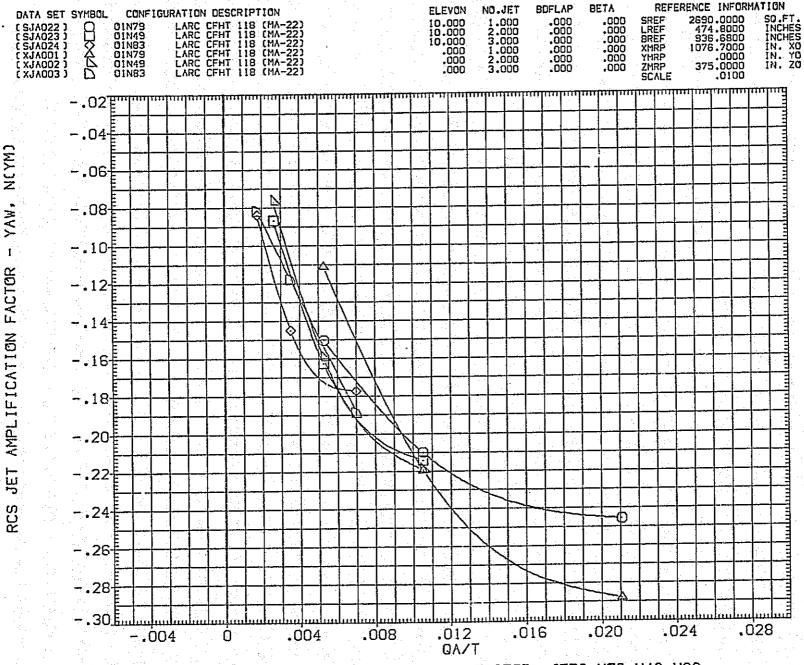


FIGURE 48. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79, N49, N83

(A)ALPHA = -8.00

PAGE 857

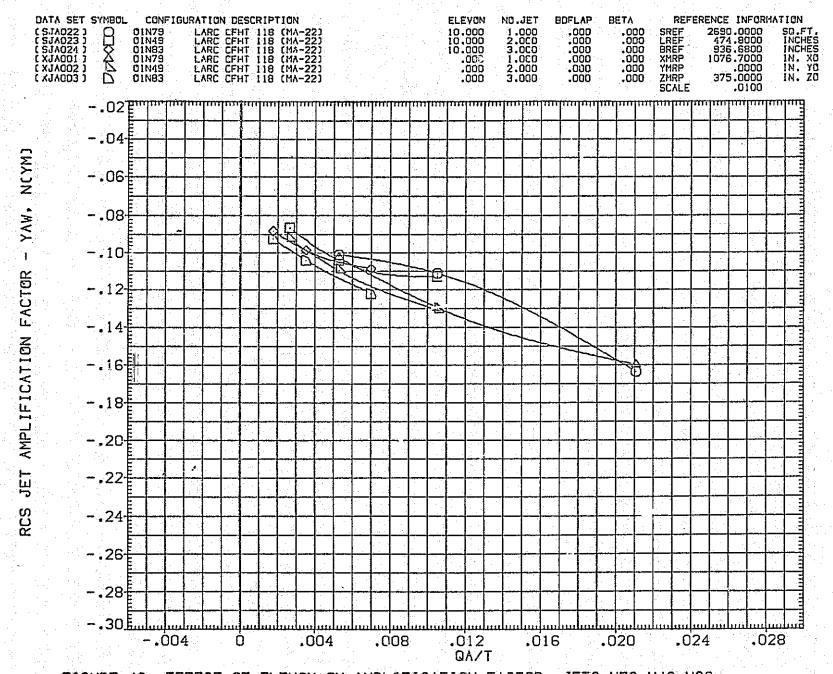


FIGURE 48. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79,N49,N83

(B)ALPHA = .00

PAGE 858



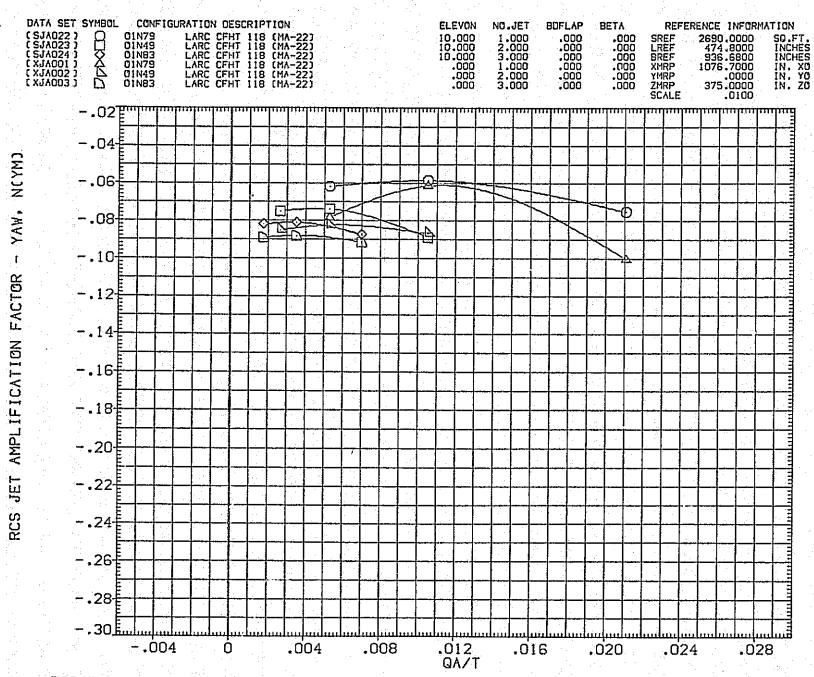


FIGURE 48. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79, N49, N83

CC) ALPHA = 10.00

PAGE

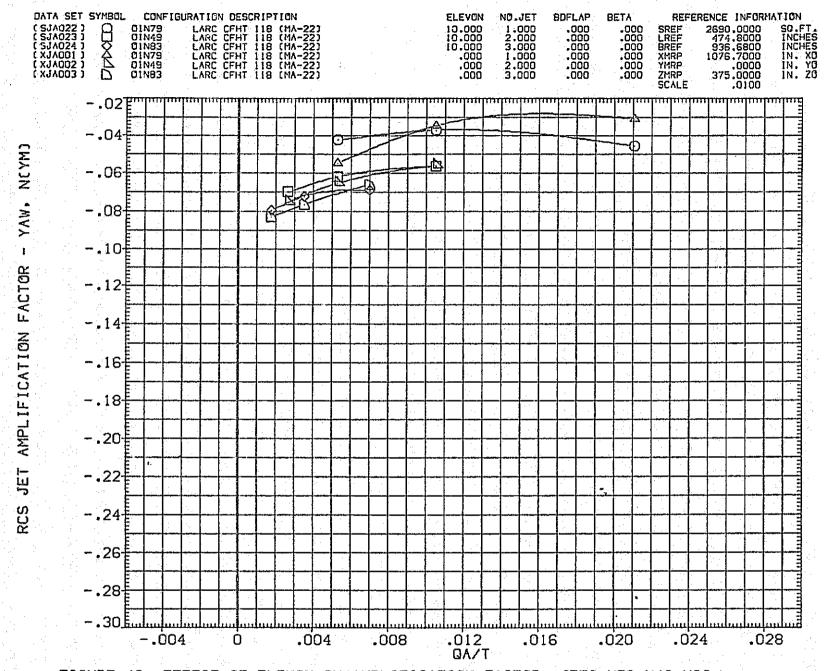


FIGURE 48. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79,N49,N83

(D)ALPHA = 20.00 PAGE 860

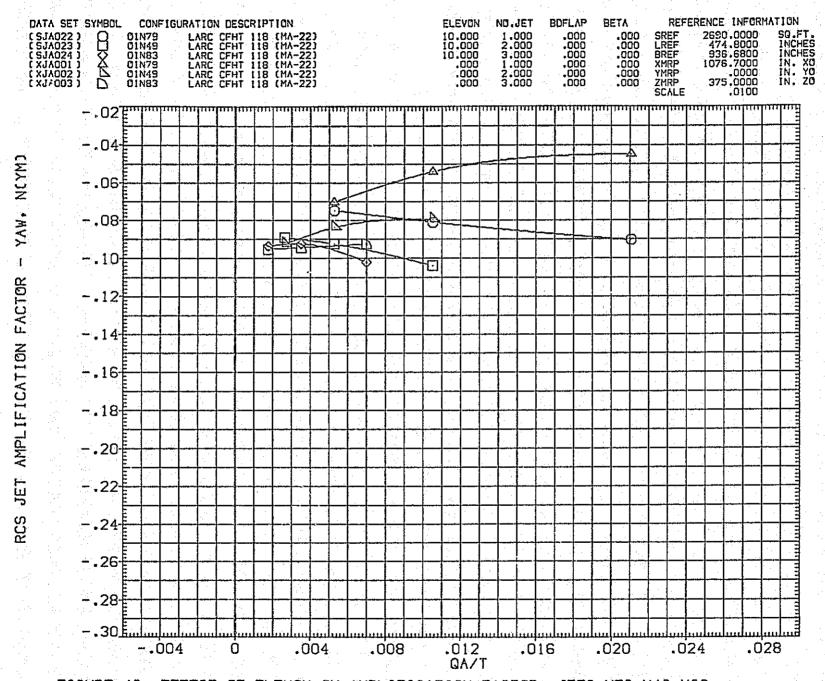


FIGURE 48. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79, N49, N83

(E)ALPHA = 35.00

PAGE 861

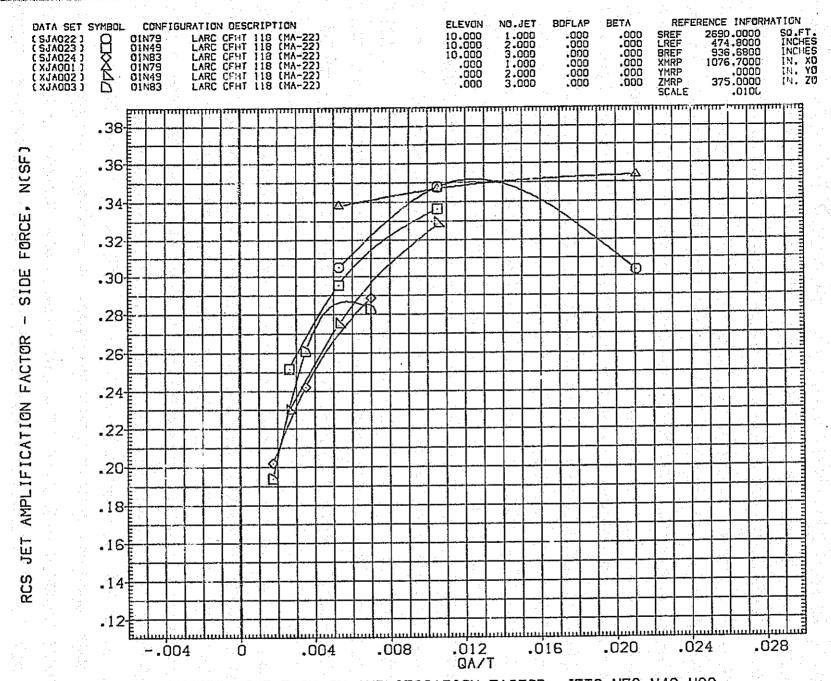


FIGURE 48. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79, N49, N83

(A)ALPHA = -8.00

PAGE 862

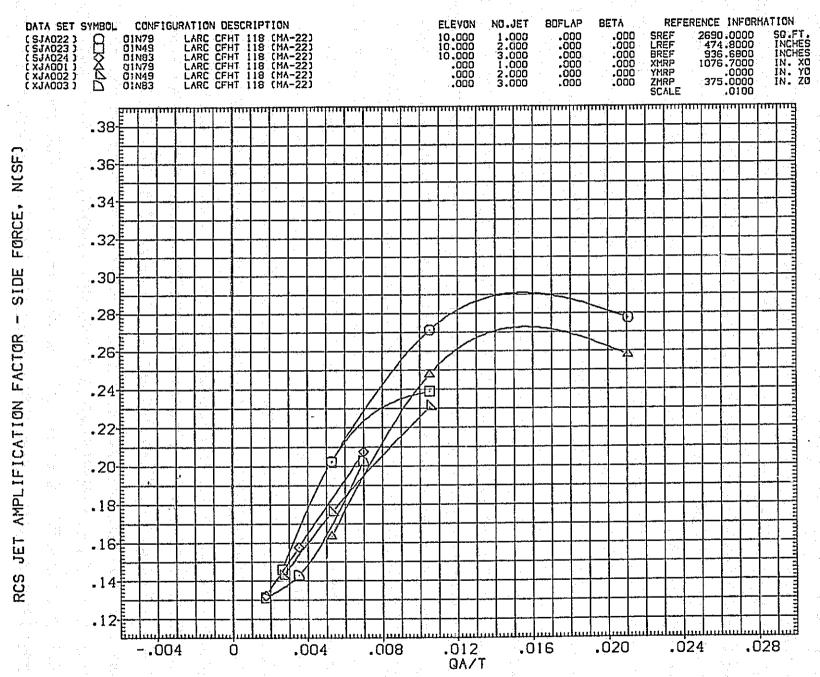


FIGURE 48. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79, N49, N83

(B) ALPHA = .00

PAGE 863

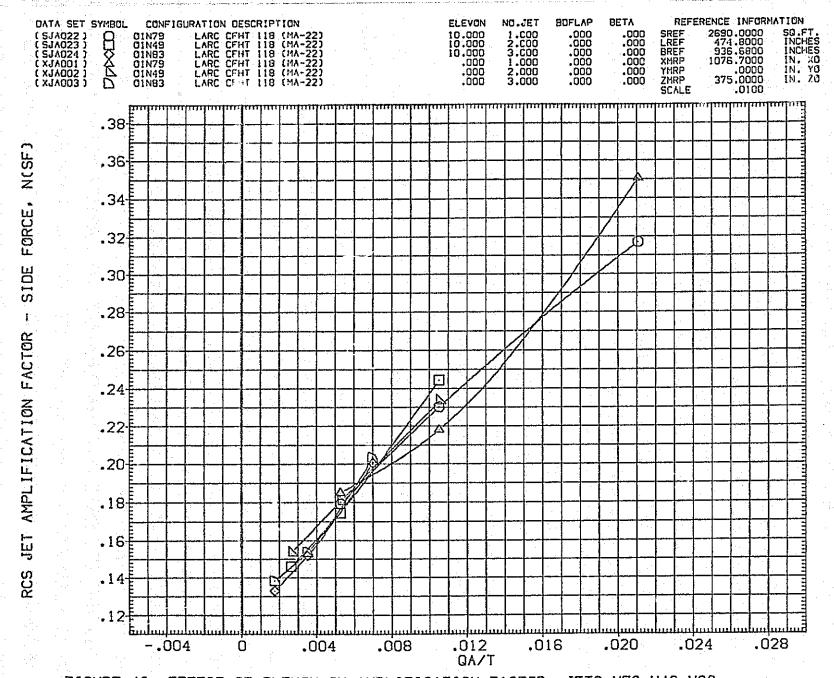


FIGURE 48. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79,N49,N83

(C)ALPHA = 10.00

PAGE 864

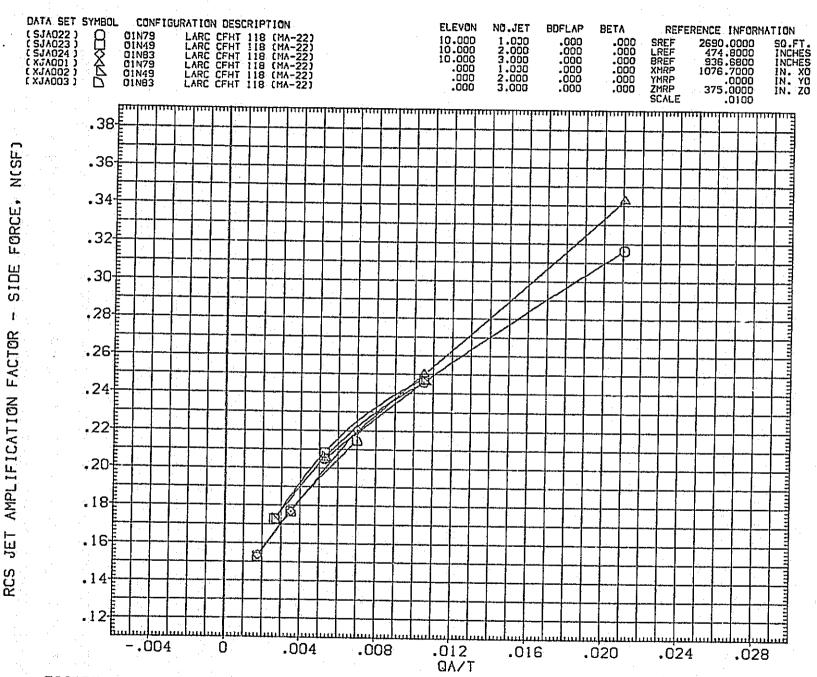


FIGURE 48. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79, N49, N83

CD) ALPHA = 20.00

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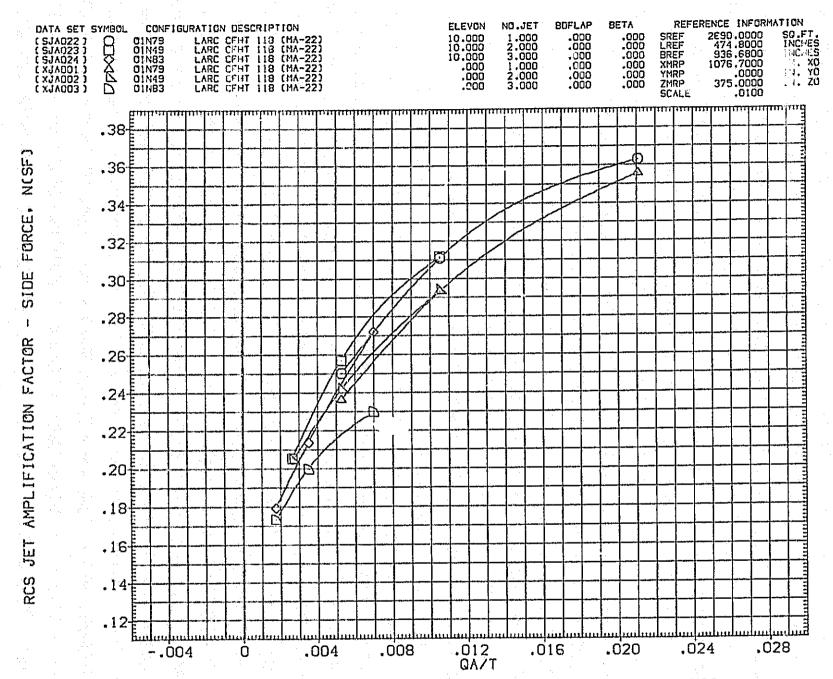


FIGURE 48. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79, N49, N83

(E)ALPHA = 35.00

PAGE 866

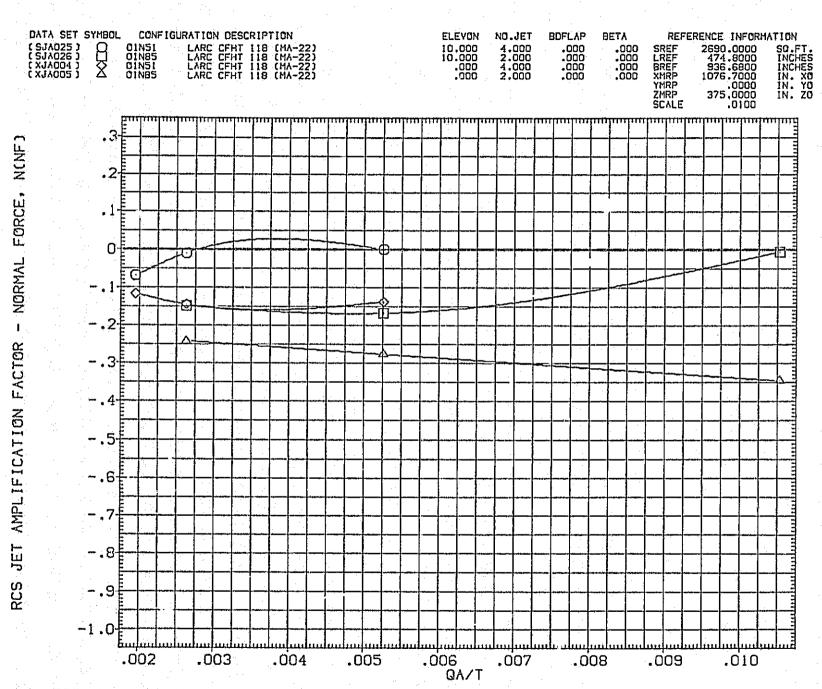


FIGURE 49. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N51,N85

PAGE 867

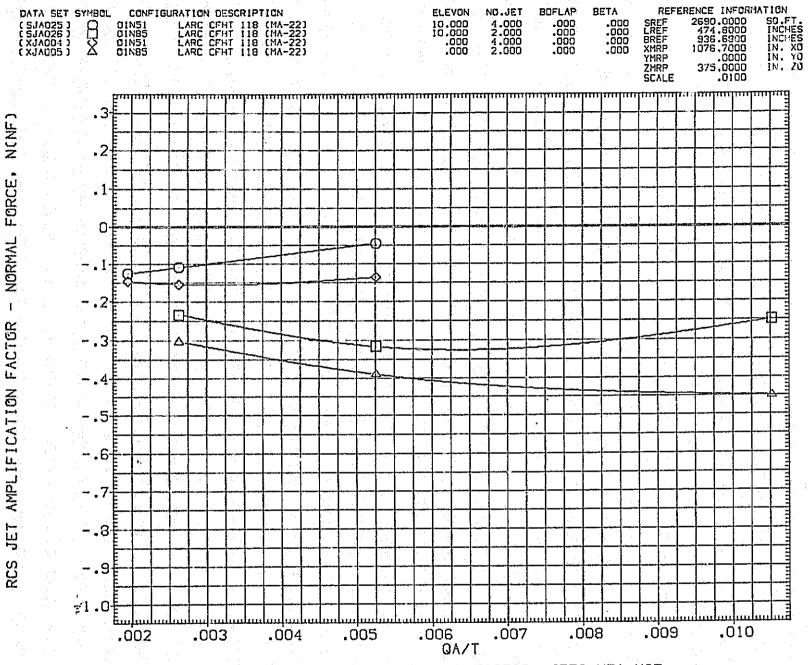


FIGURE 49. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N51,N85

CB)ALPHA = .00

PAGE 868

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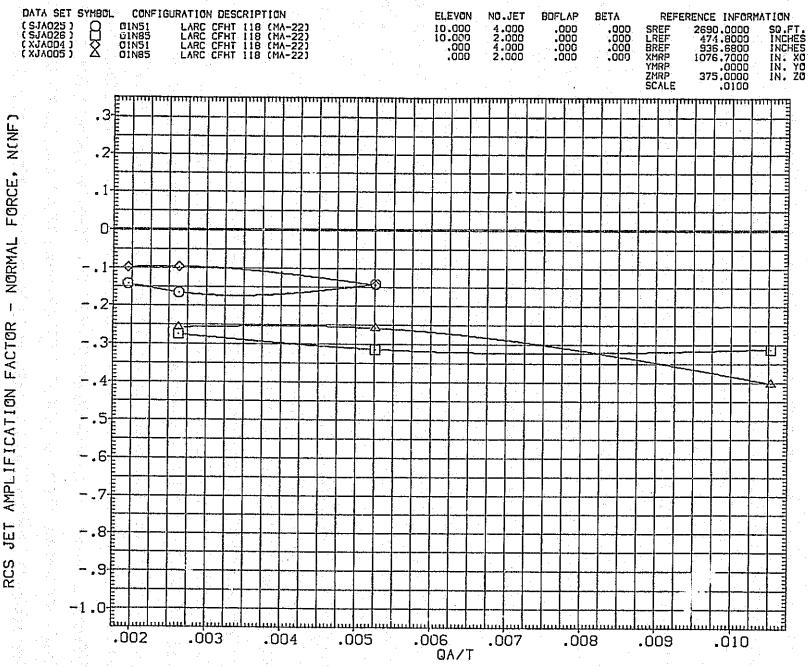


FIGURE 49. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N51, N85

PAGE 869

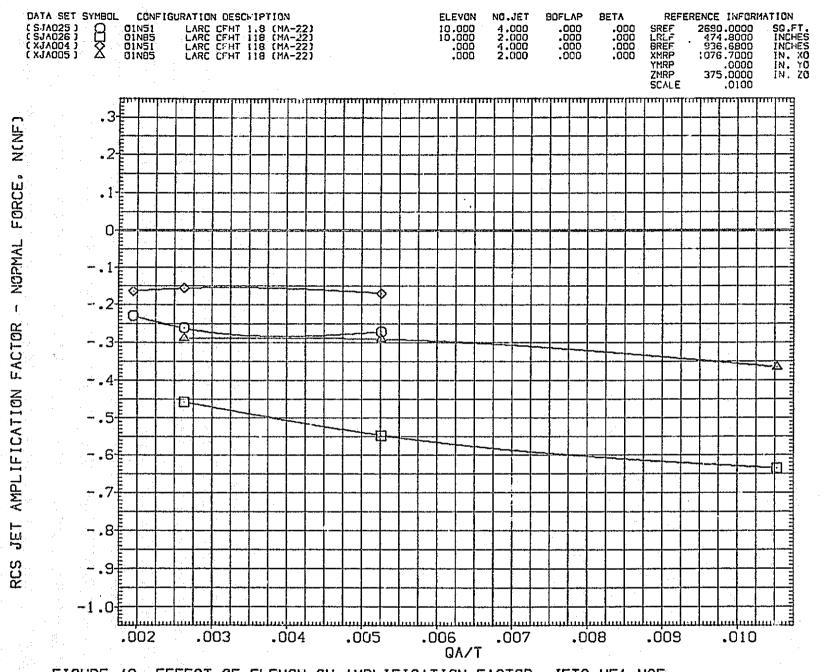


FIGURE 49. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N51,N85

(D)ALPHA = 20.00 PAGE 870

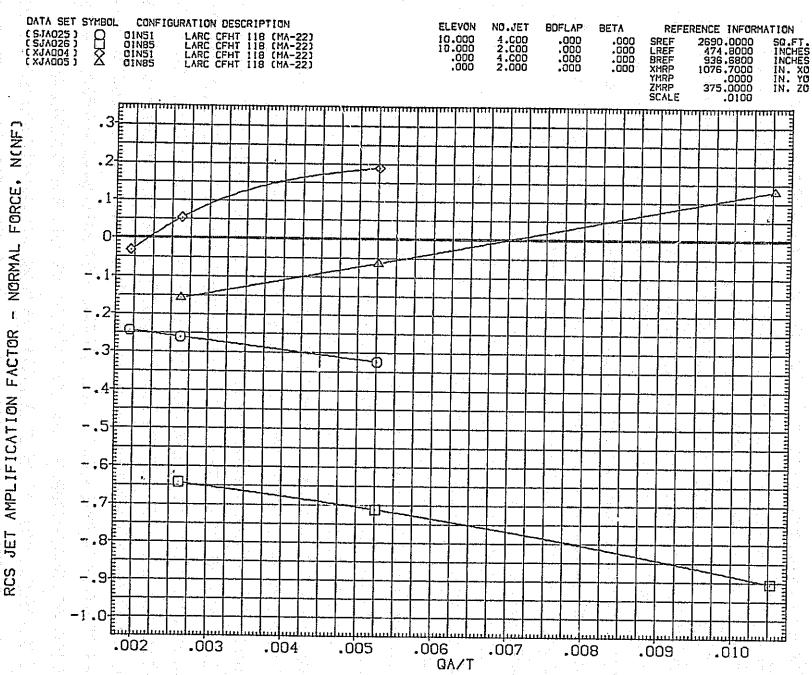


FIGURE 49. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N51, N85 (E)ALPHA = 35.00

PAGE 871

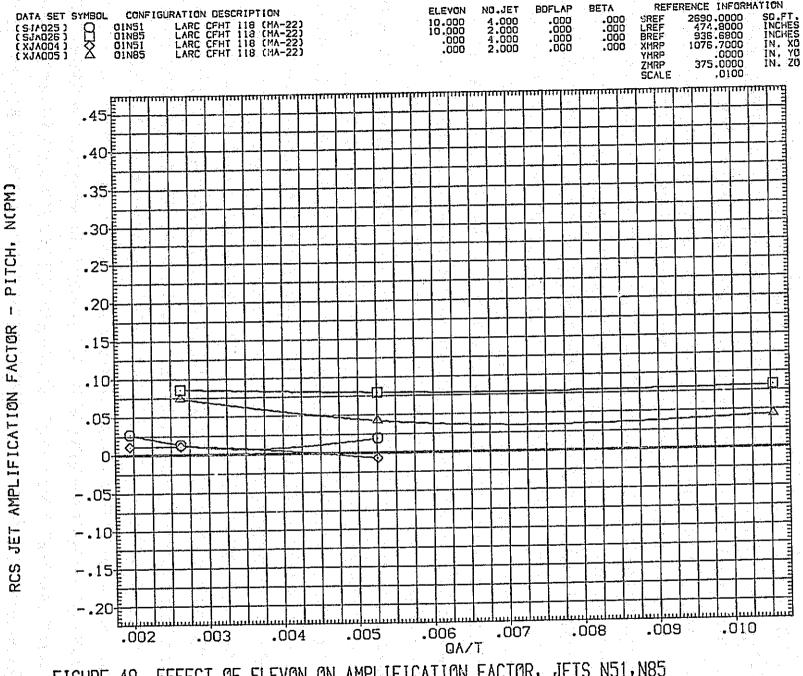


FIGURE 49. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N51,N85

PAGE 872

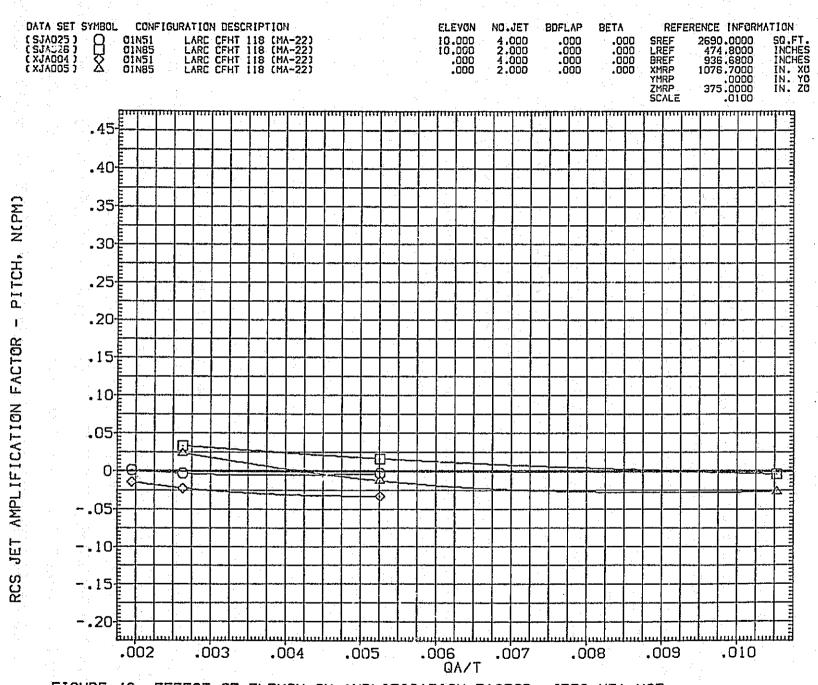


FIGURE 49. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N51,N85
(B)ALPHA = .00

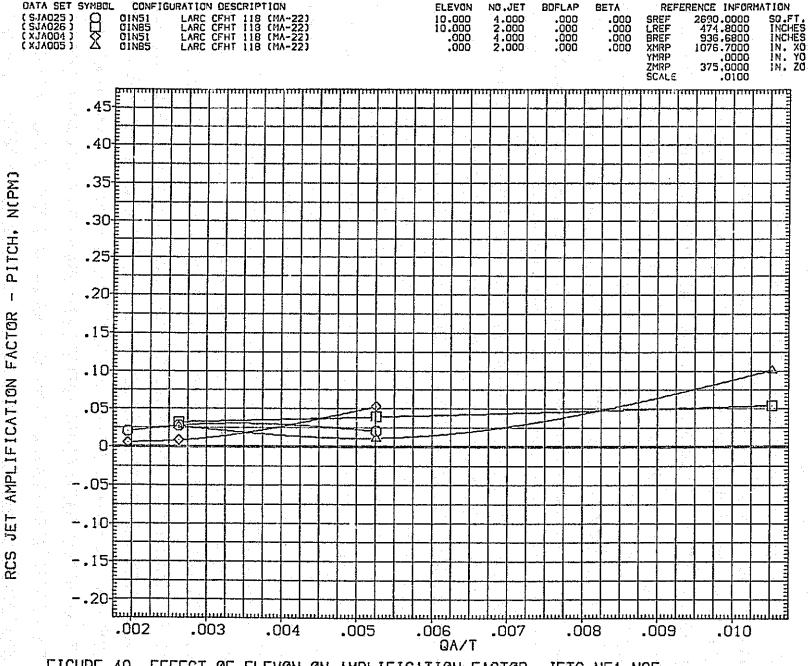


FIGURE 49. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N51,N85

(C)ALPHA = 10.00

PAGE

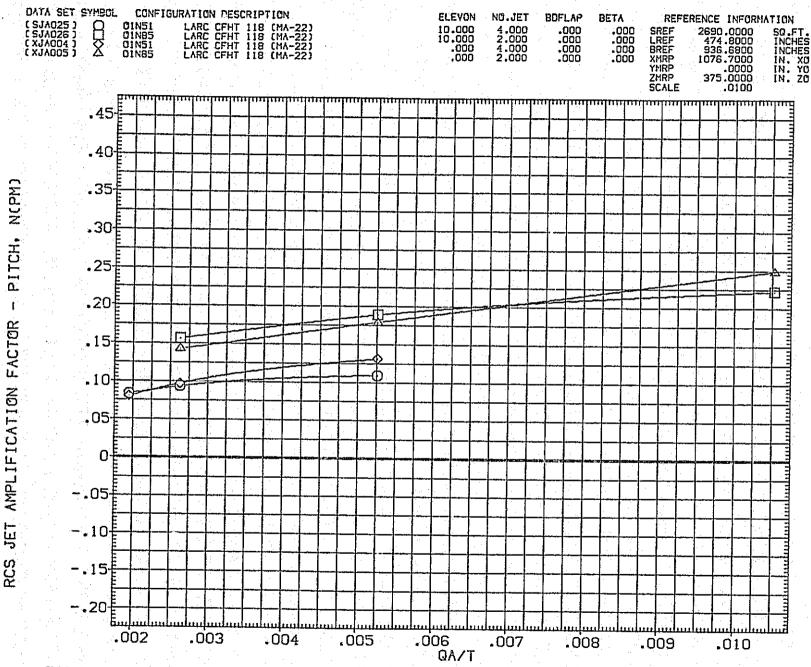


FIGURE 49. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N51, N85

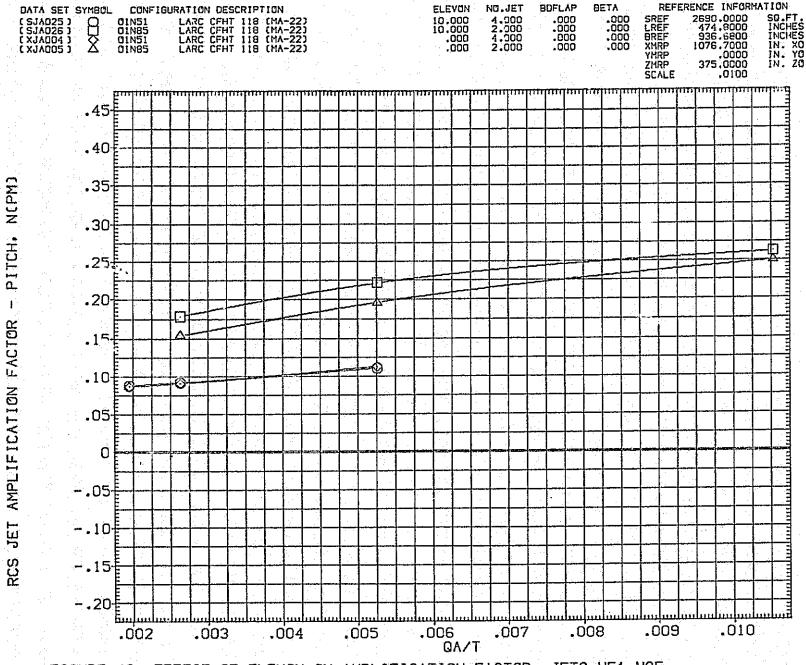


FIGURE 49. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N51,N85

(E)ALPHA = 35.00

PAGE 876

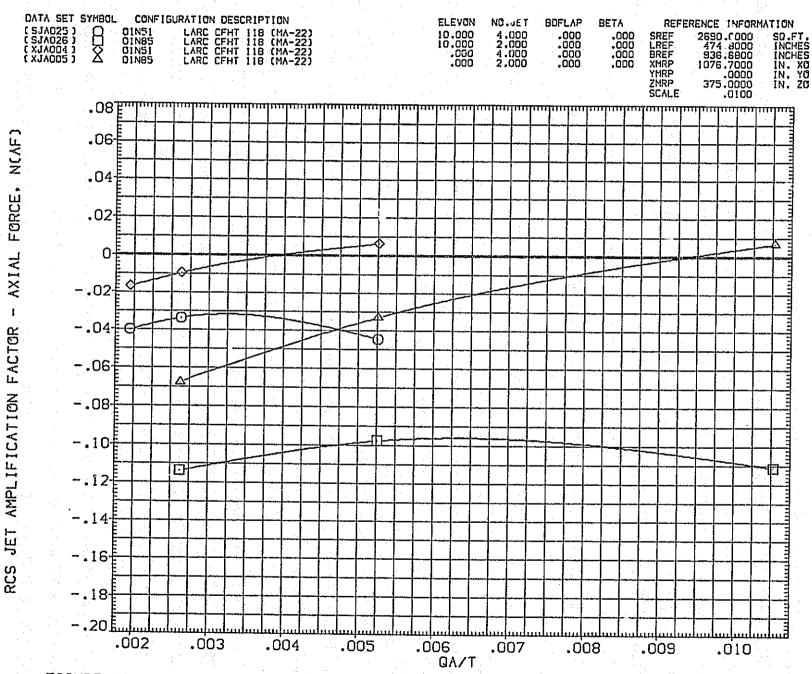


FIGURE 49. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N51, N85
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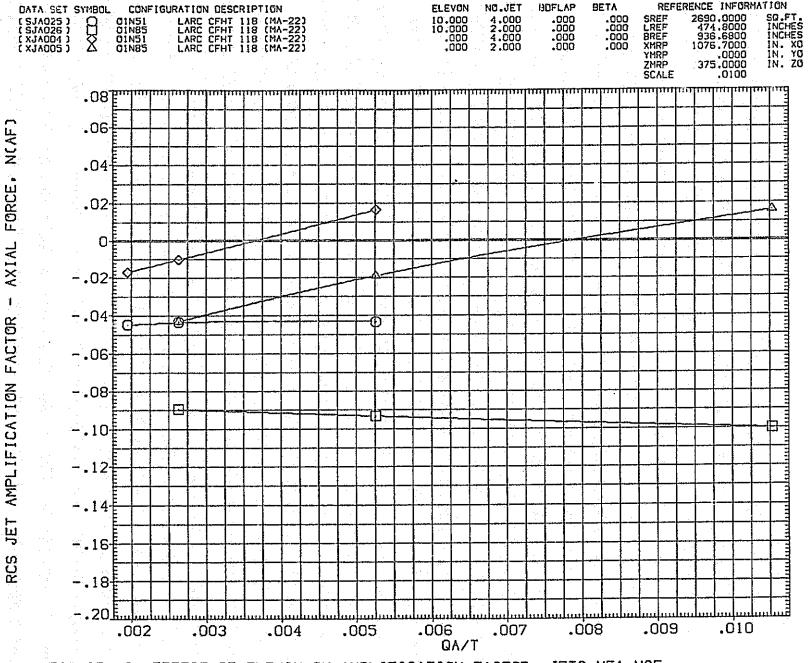


FIGURE 49. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N51,N85

(B)ALPHA = .00

PAGE 878

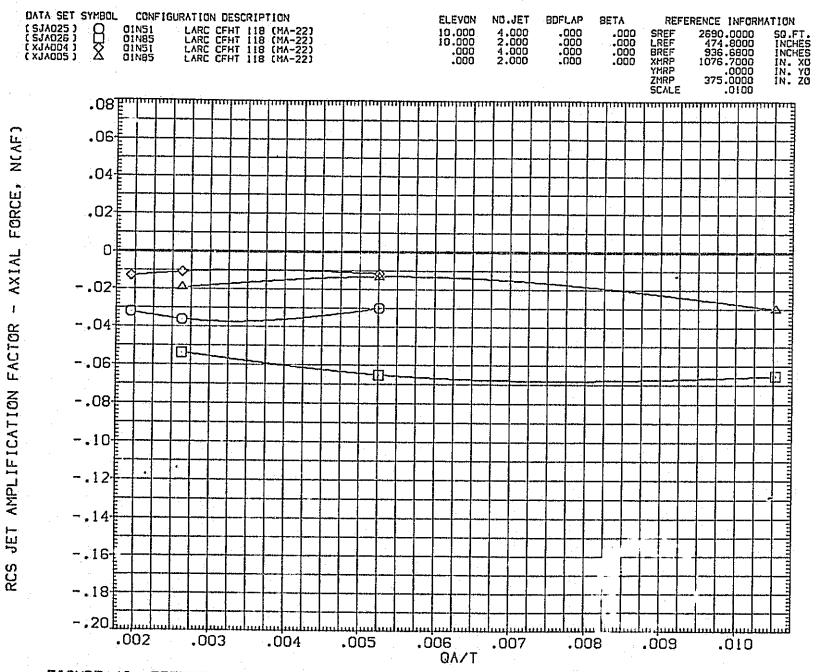


FIGURE 49. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N51.N85 (C)ALPHA = 10.00

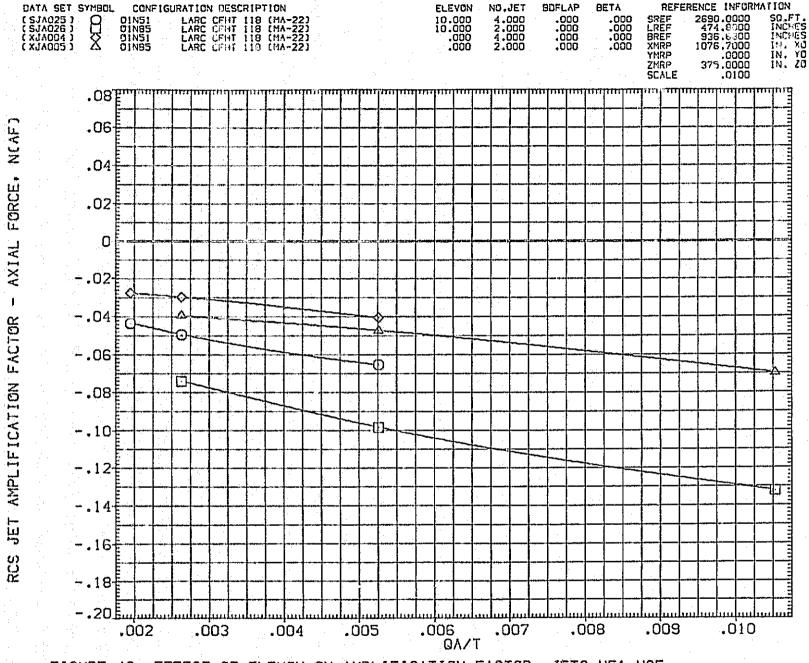


FIGURE 49. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N51,N85

CD)ALPHA = 20.00

PAGE 880

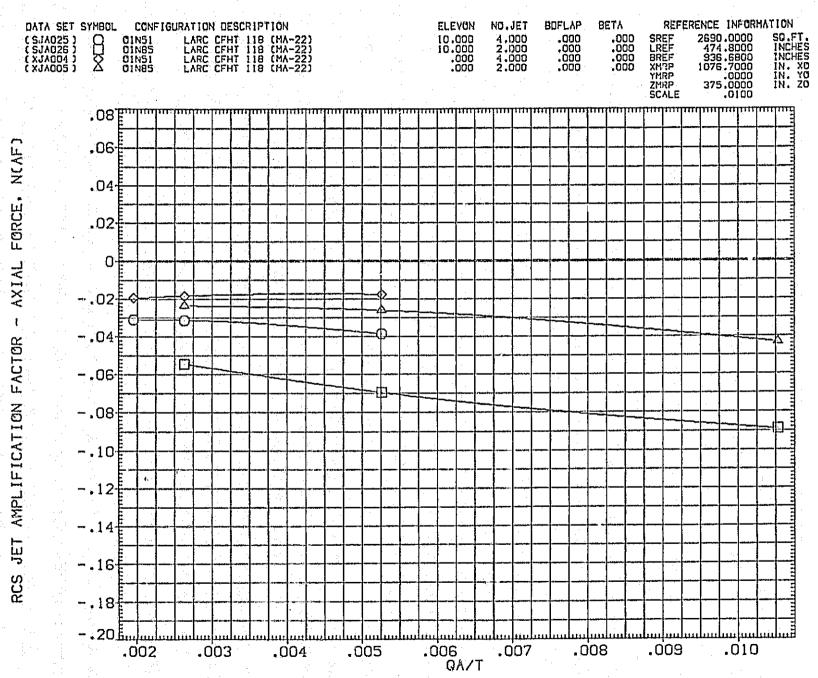


FIGURE 49. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N51, N85 (E) ALPHA = 35.00

BDFLAP

DATA SET SYMBOL

CONFIGURATION DESCRIPTION

FIGURE 49. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N51,N85

(A)ALPHA = -8.00

PAGE

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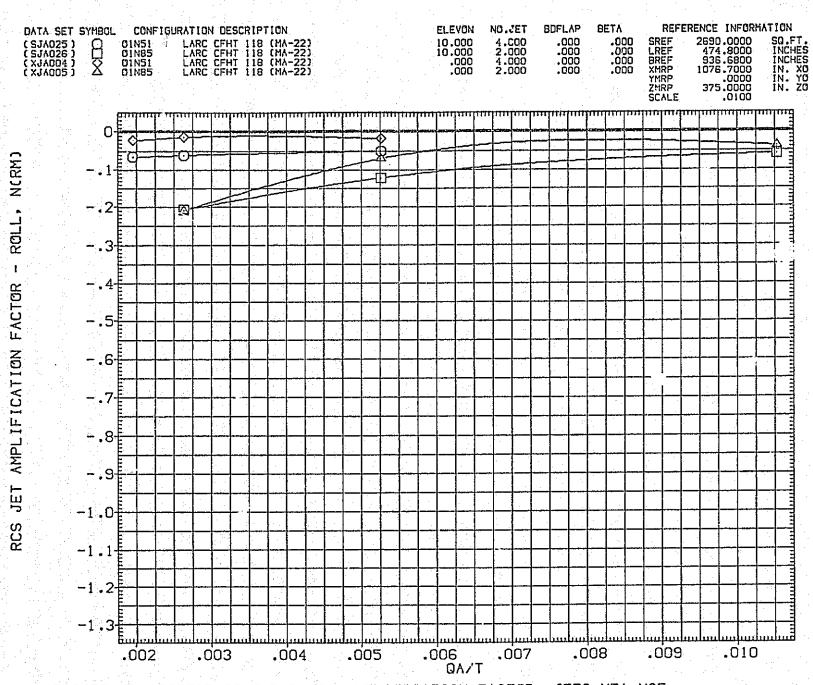


FIGURE 49. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N51,N85

(B) ALPHA = .00

PAGE

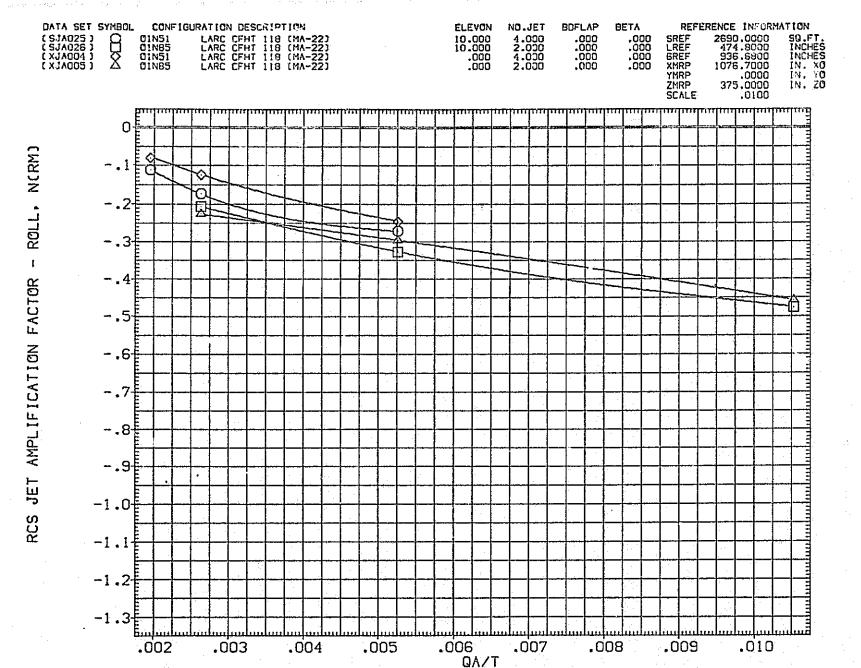


FIGURE 49. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N51,N85

CC)ALPHA = 10.00

PAGE 884

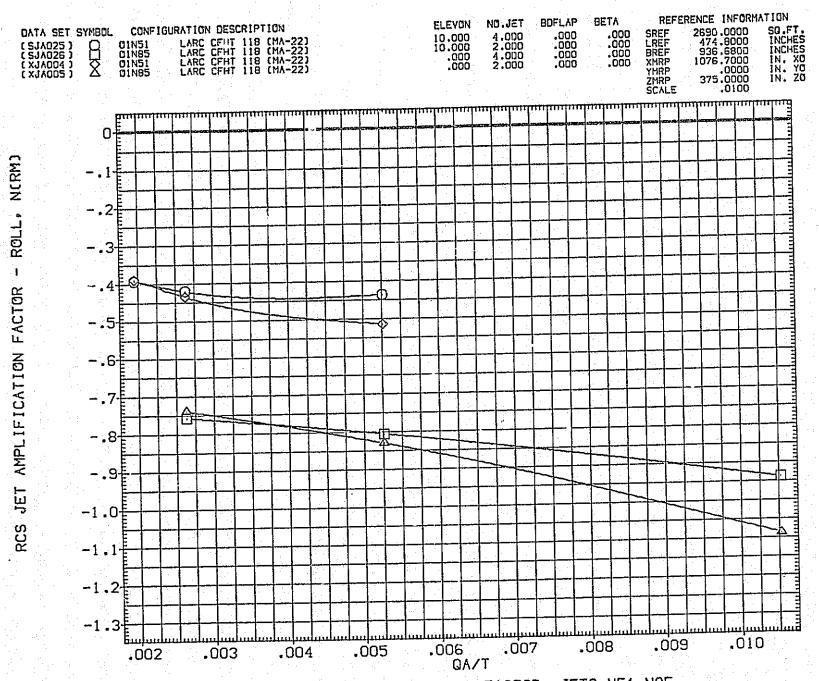


FIGURE 49. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N51, N85

(D) ALPHA = 20.00

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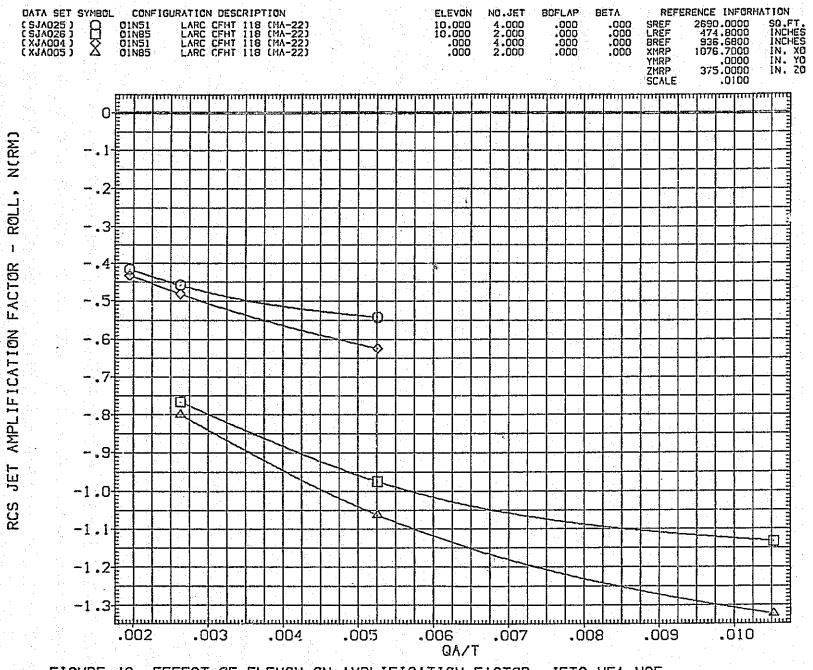


FIGURE 49. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N51,N85

(E)ALPHA = 35.00

PAGE 886

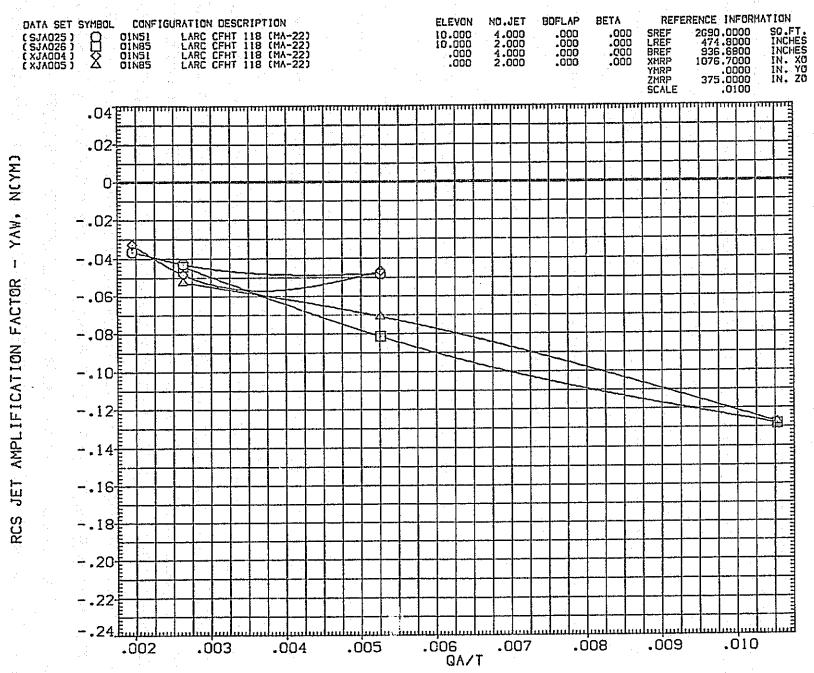


FIGURE 49. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N51, N85

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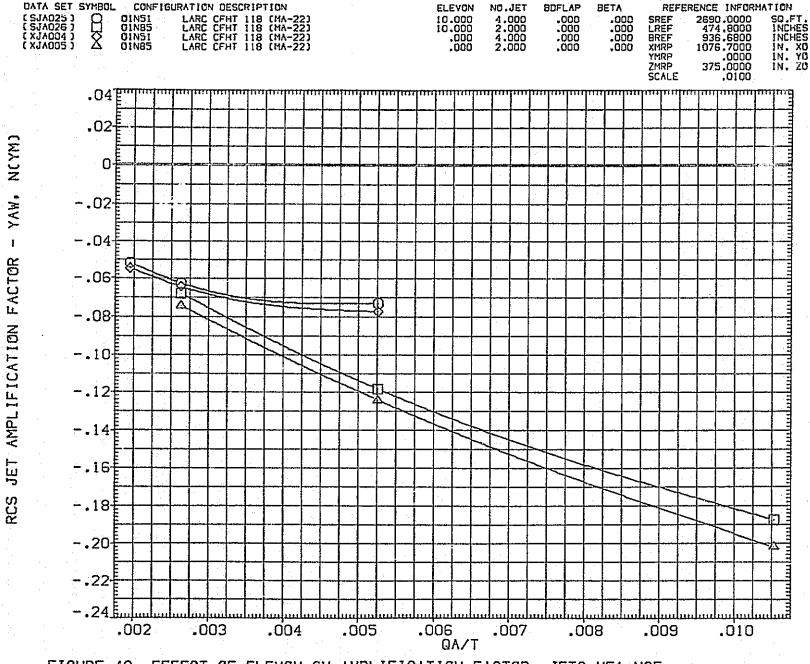


FIGURE 49. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N51,N85

(B)ALPHA = .00

PAGE 888

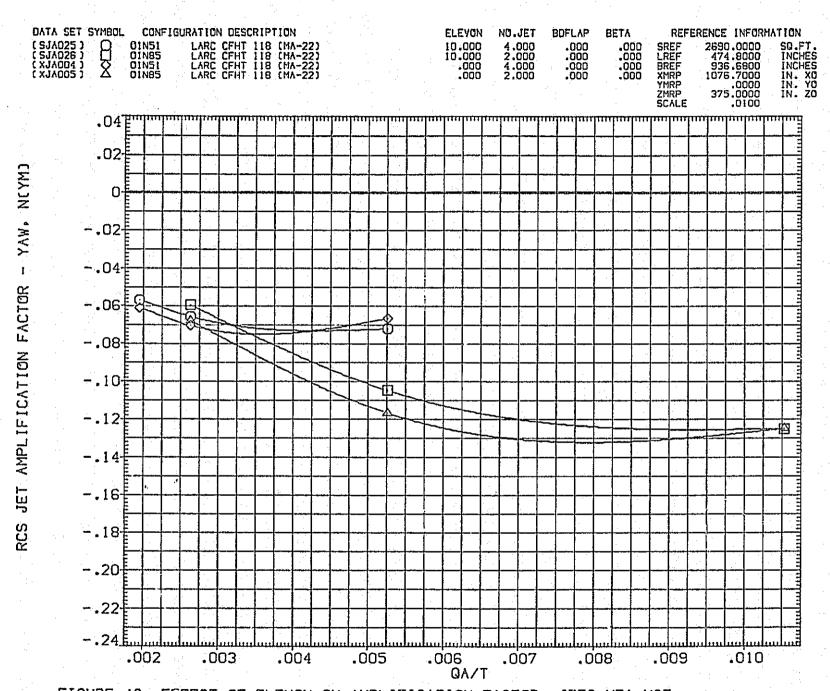


FIGURE 49. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N51,N85

CC)ALPHA = 10.00

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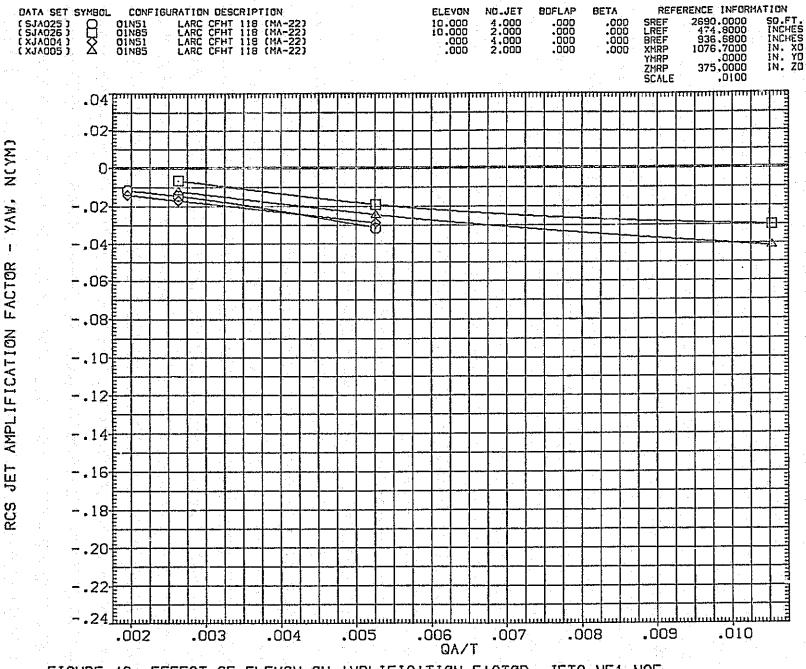


FIGURE 49. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N51,N85

CD3ALPHA = 20.00 PAGE 890

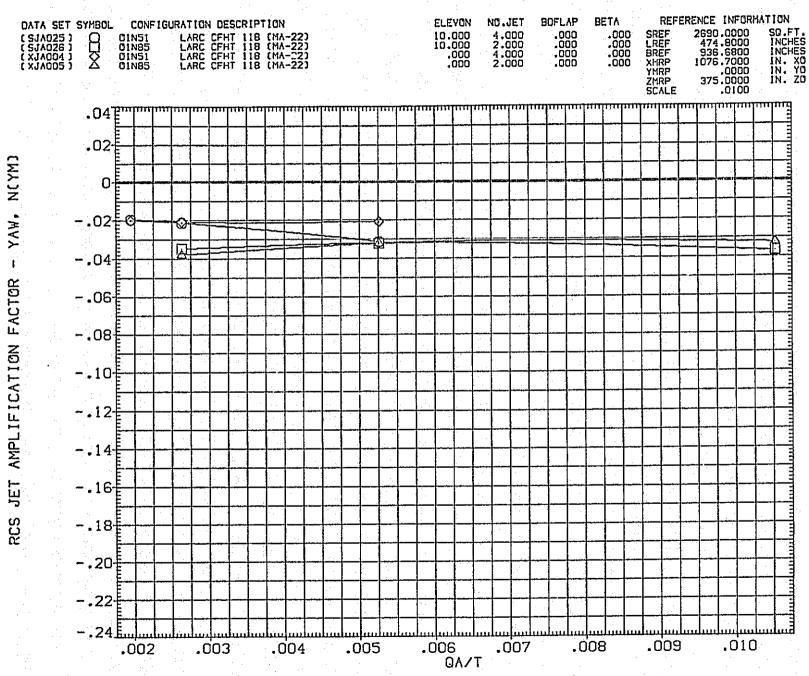
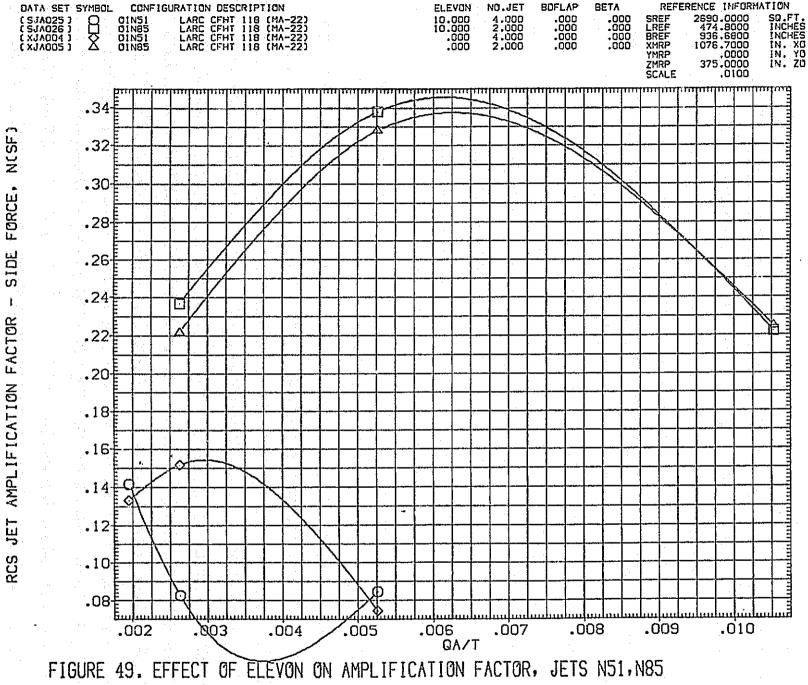


FIGURE 49. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N51, N85 (E) ALPHA = 35.00



(A)ALPHA = -8.00

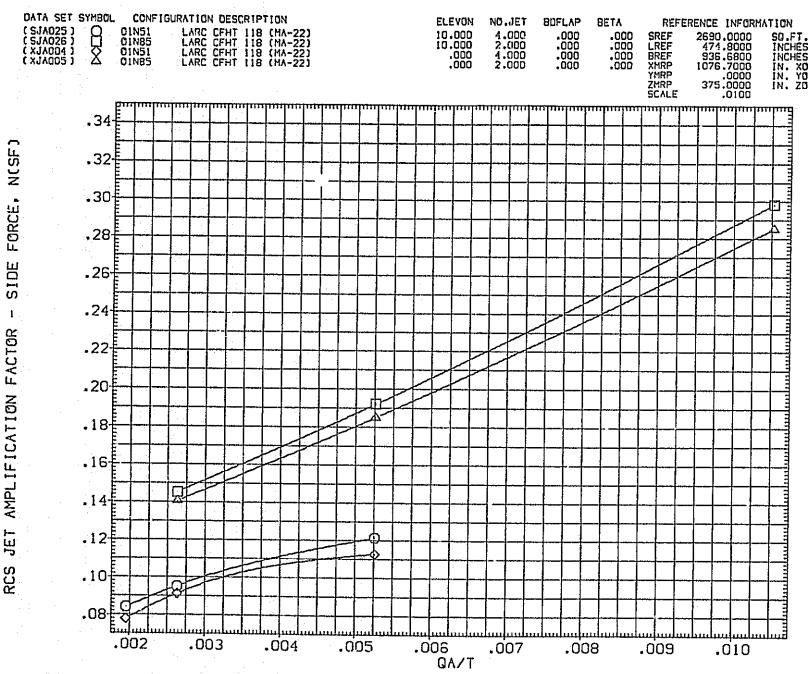


FIGURE 49. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N51, N85
(B) ALPHA = .00

f \GE 893

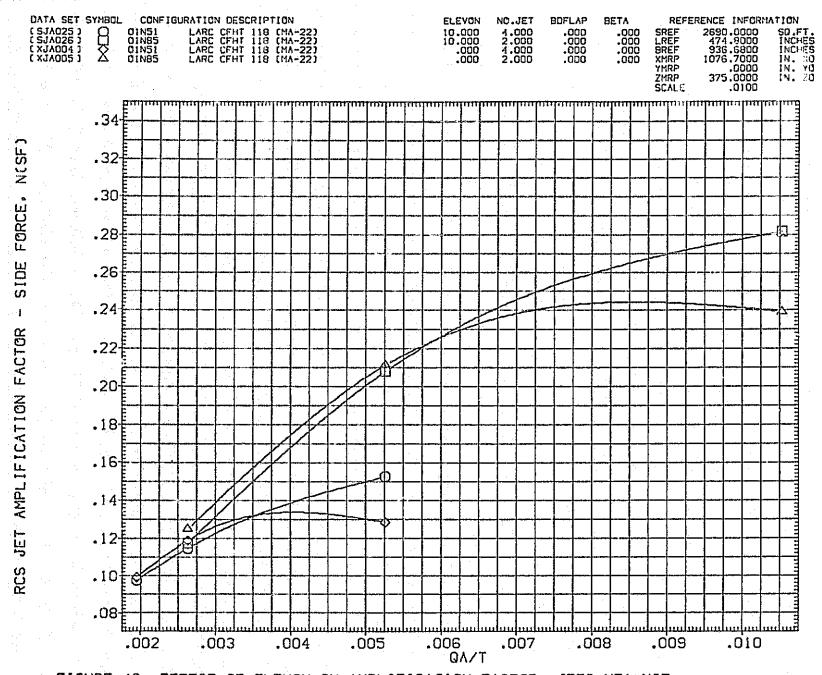


FIGURE 49. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N51,N85

CC)ALPHA = 10.00

PAGE 894

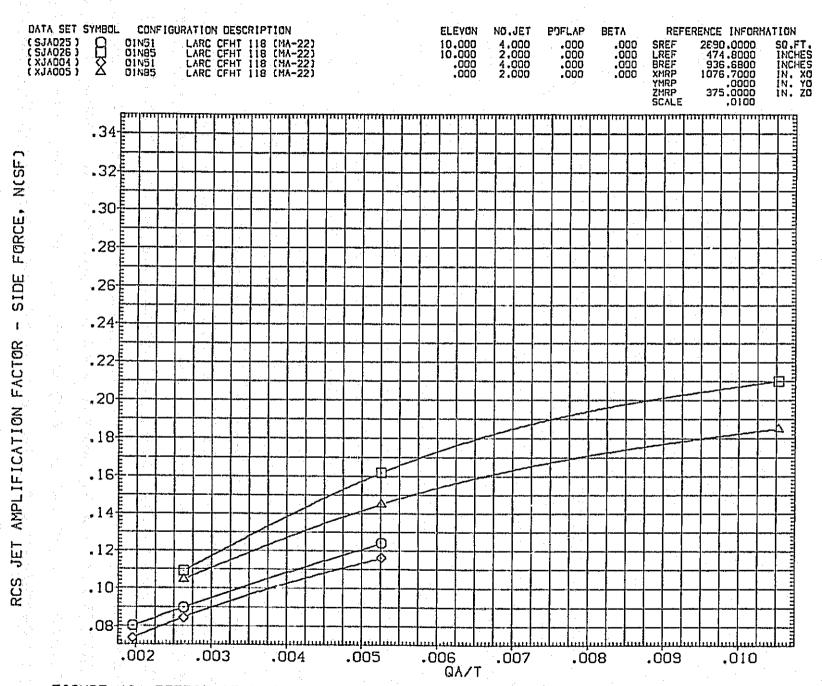


FIGURE 49. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N51, N85

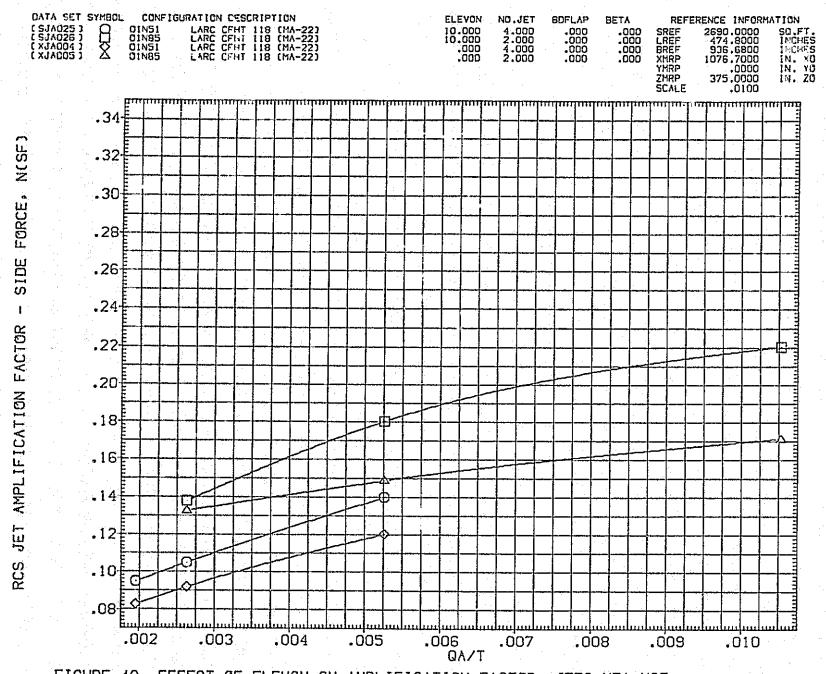


FIGURE 49. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N51,N85

(E)ALPHA = 35.00

PAGE 896

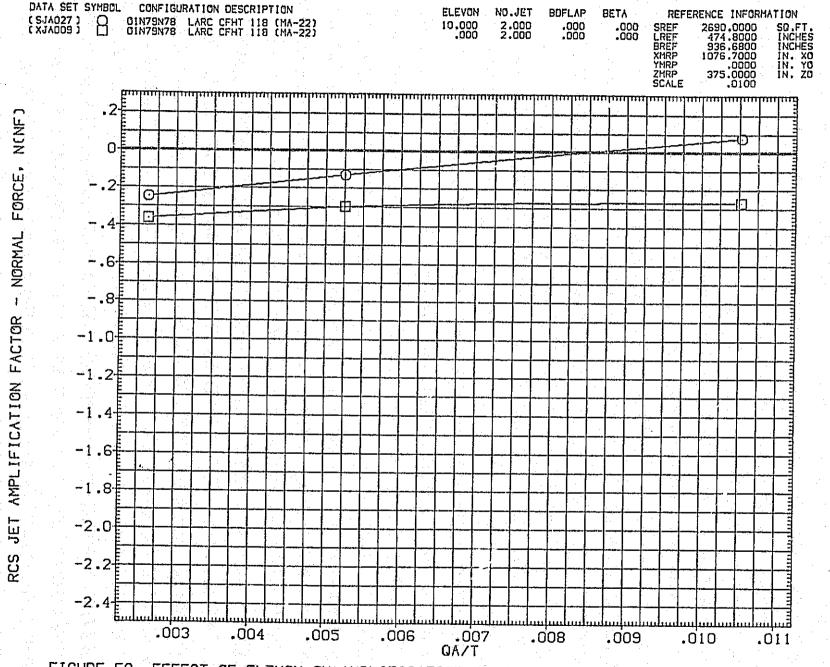


FIGURE 50. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79N78

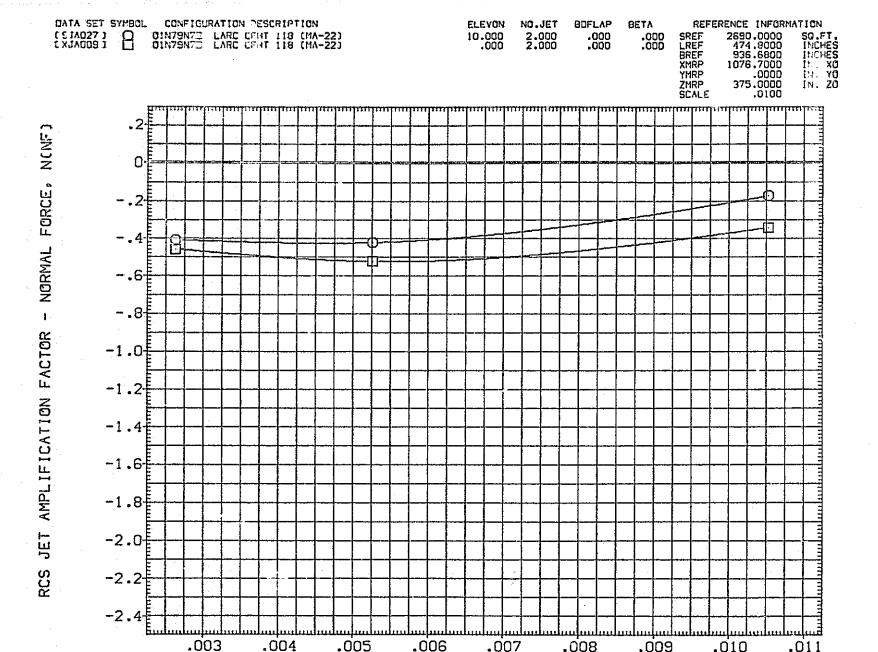


FIGURE 50. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79N78 (B)ALPHA = .00 PAGE 898

.007

QA/T

.008

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.004

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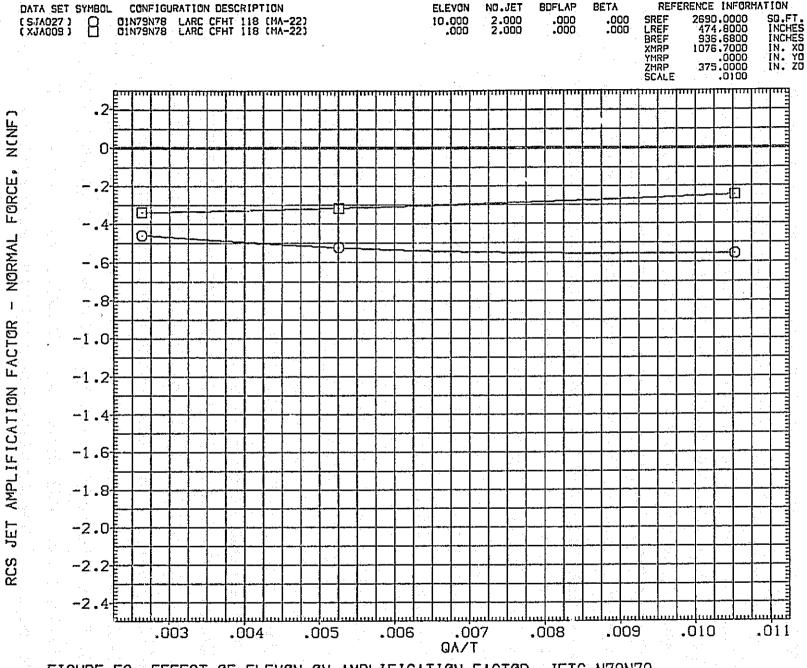


FIGURE 50. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79N78

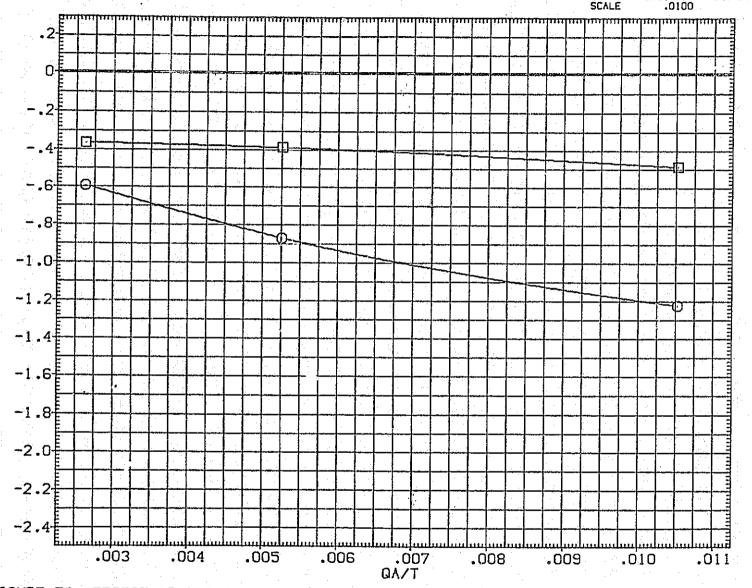


FIGURE 50. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79N78

CD)ALPHA = 20.00

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N(NF)

FORCE,

NORMAL

JET AMPLIFICATION FACTOR

* + <u>/**</u>

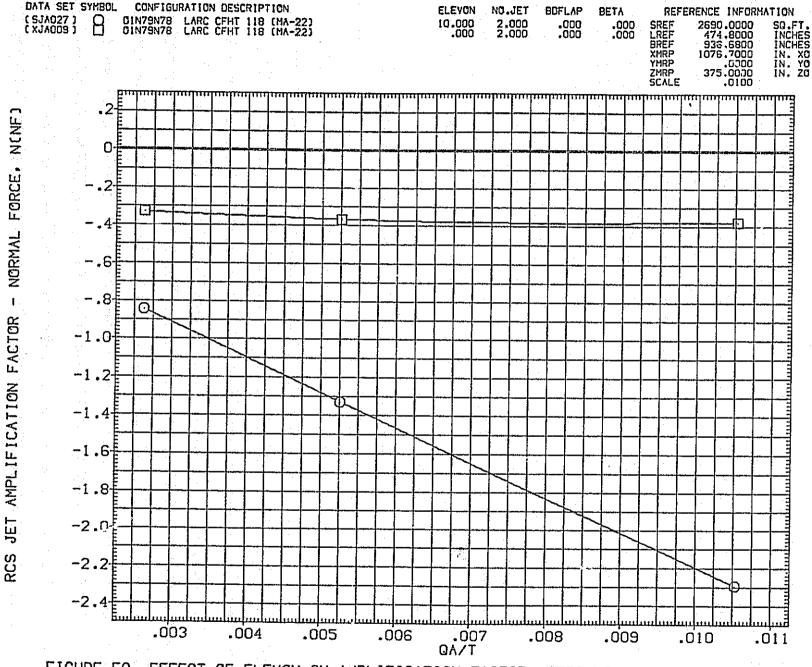


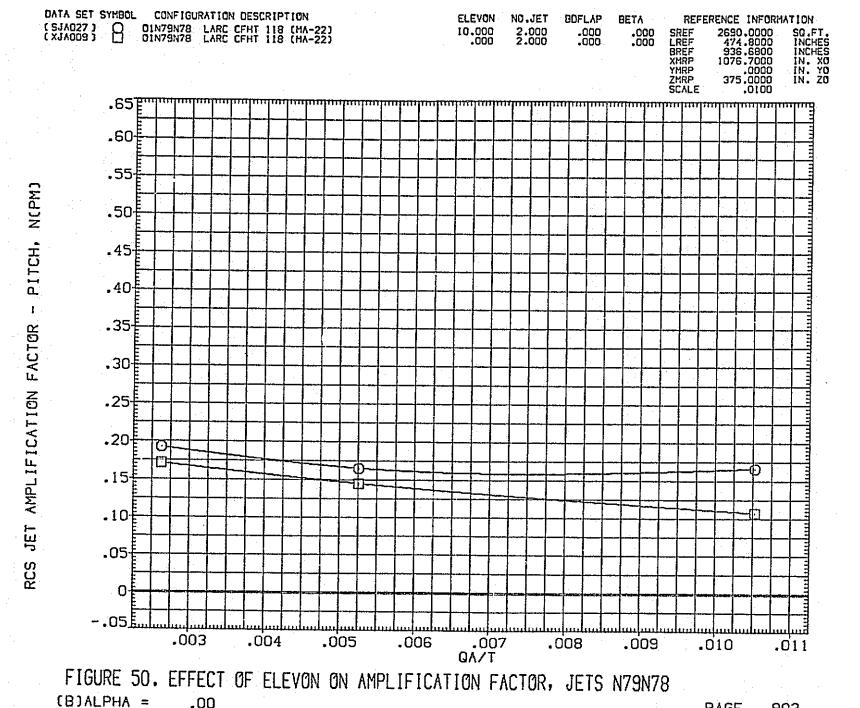
FIGURE 50. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79N78 (E)ALPHA = 35.00

FIGURE 50. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79N78

(A)ALPHA = -8.00

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NC PM)

PITCH,

JET AMPLIFICATION FACTOR

RCS

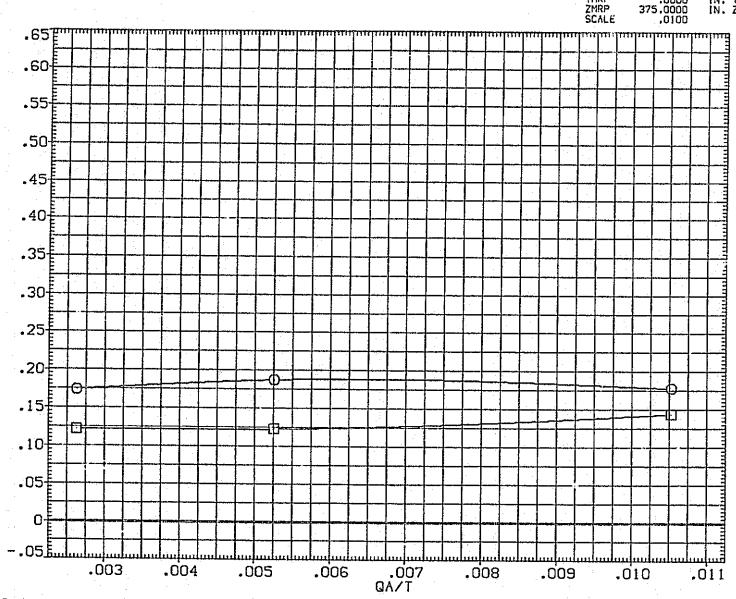
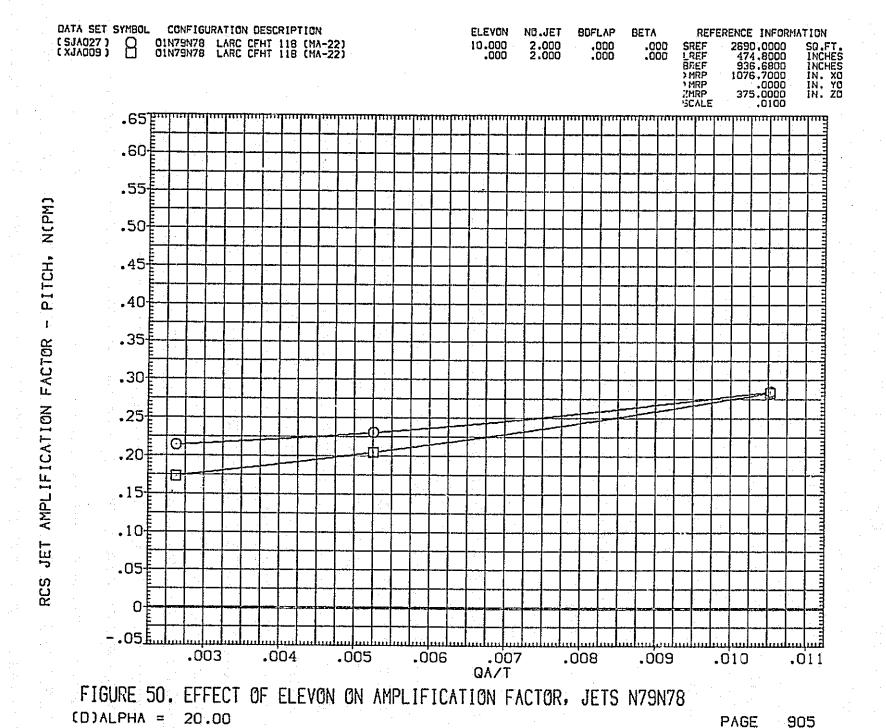


FIGURE 50. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79N78 (C)ALPHA = 10.00



N(PM)

FACTOR

AMPLIFICATION

JET

RCS

PAGE

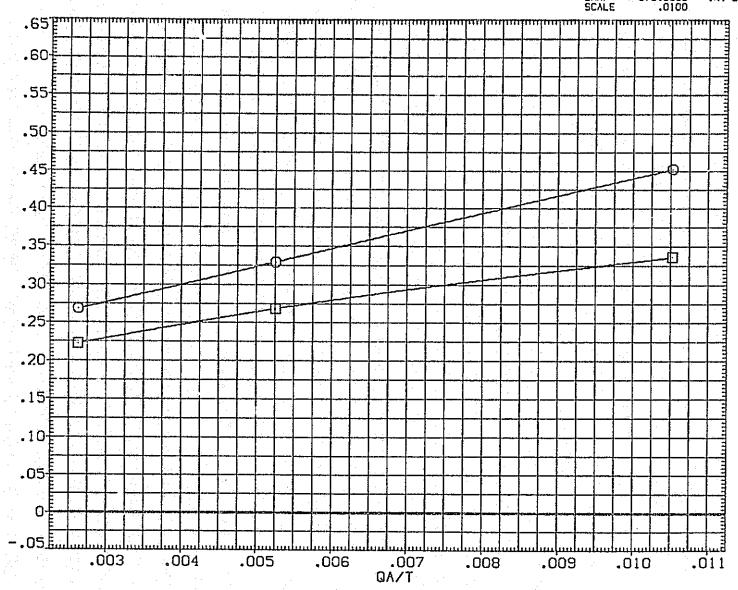


FIGURE 50. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79N78
(E)ALPHA = 35.00

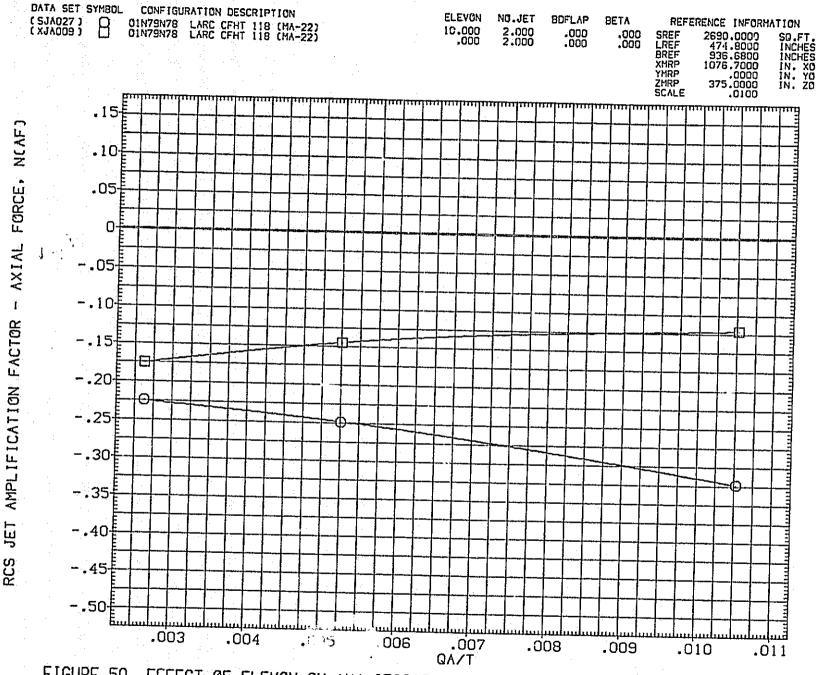
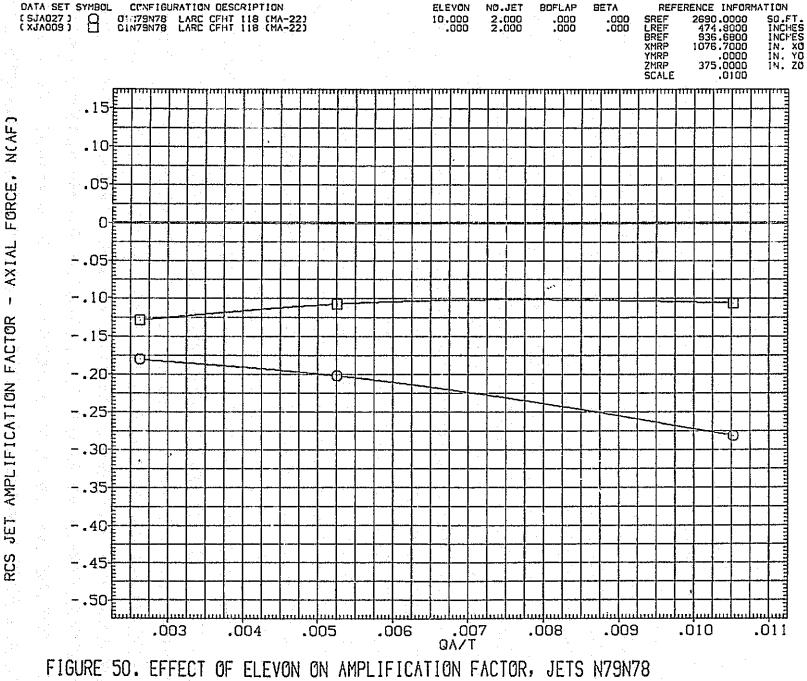


FIGURE 50. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79N78



(B)ALPHA = .00 908 PAGE

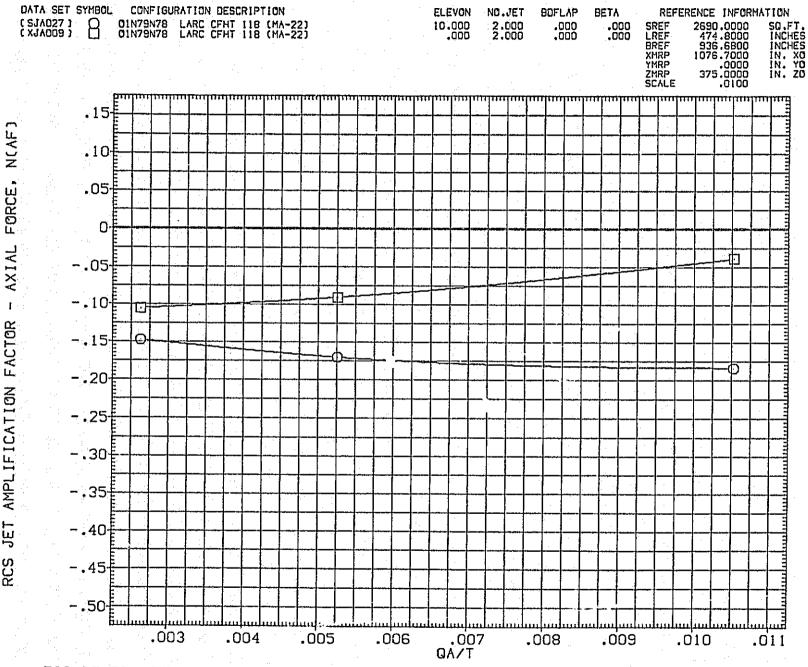


FIGURE 50. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79N78 (C)ALPHA = 10.00

N(AF)

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AMPLIFICATION FACTOR

JET

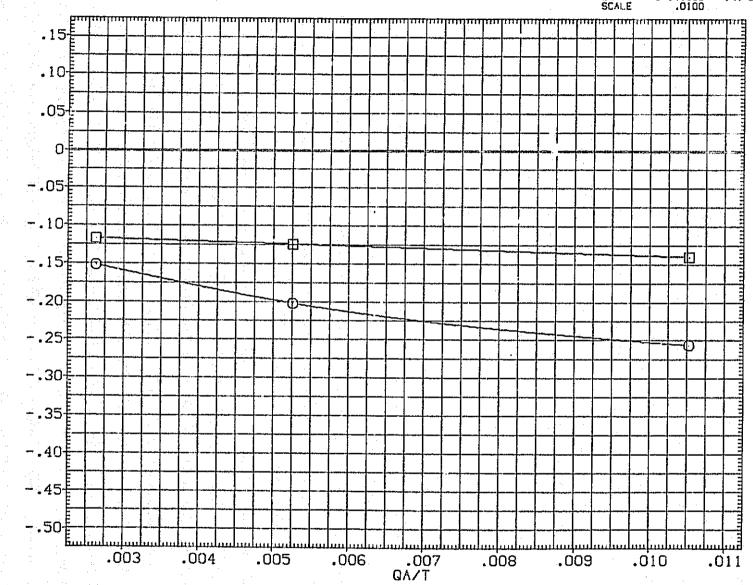


FIGURE 50. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79N78 (D)ALPHA = 20.00

PAGE 910

SO.FT. INCHES INCHES IN. XO IN. YO IN. ZO

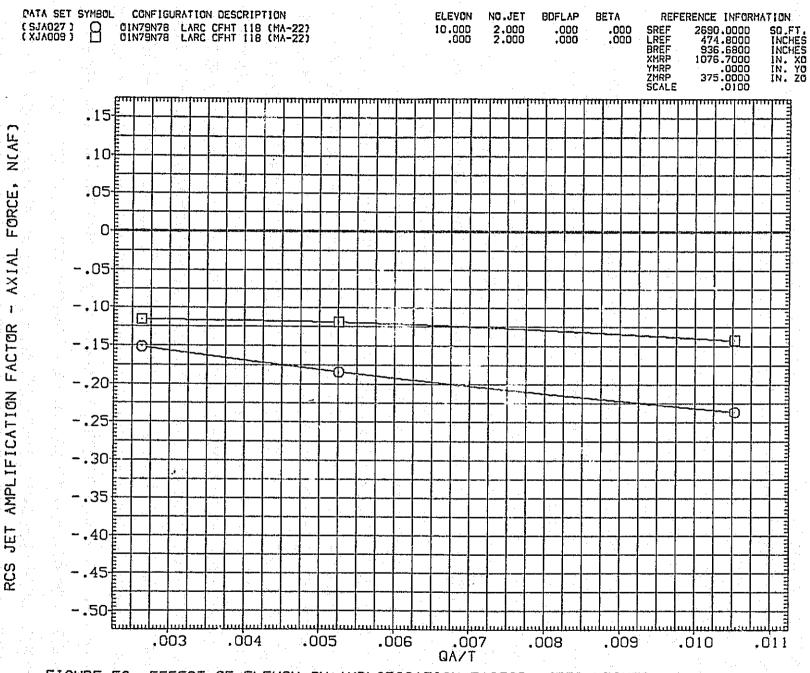


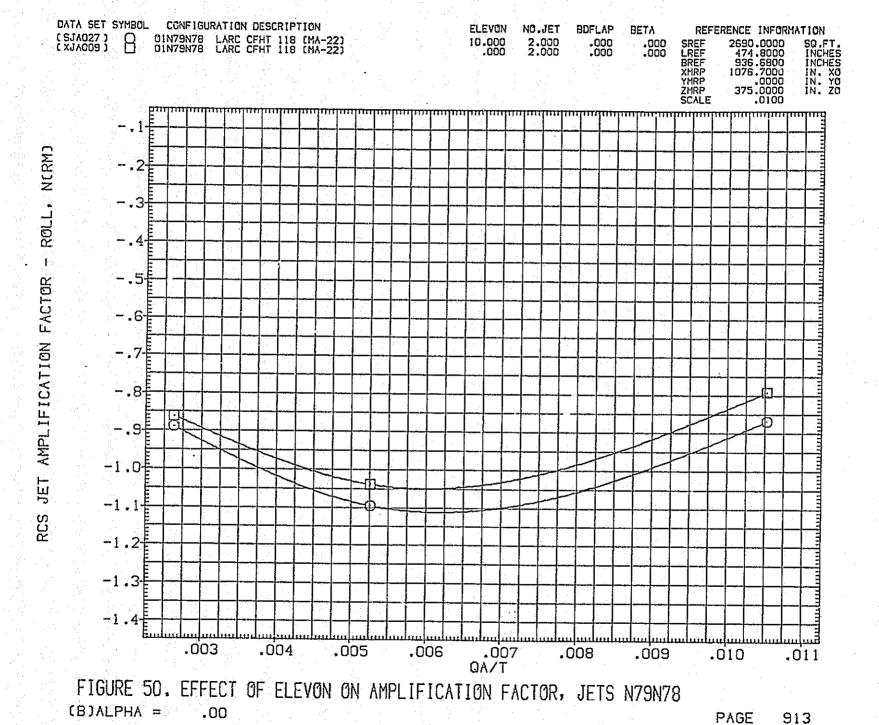
FIGURE 50. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79N78

CEDALPHA = 35.00

NO.JET

CONFIGURATION DESCRIPTION

FIGURE 50. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79N78 (A)ALPHA = -8.00912 PAGE



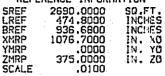
N(RM)

ROLL:

FACTOR

AMPL IF ICATION

JET



914

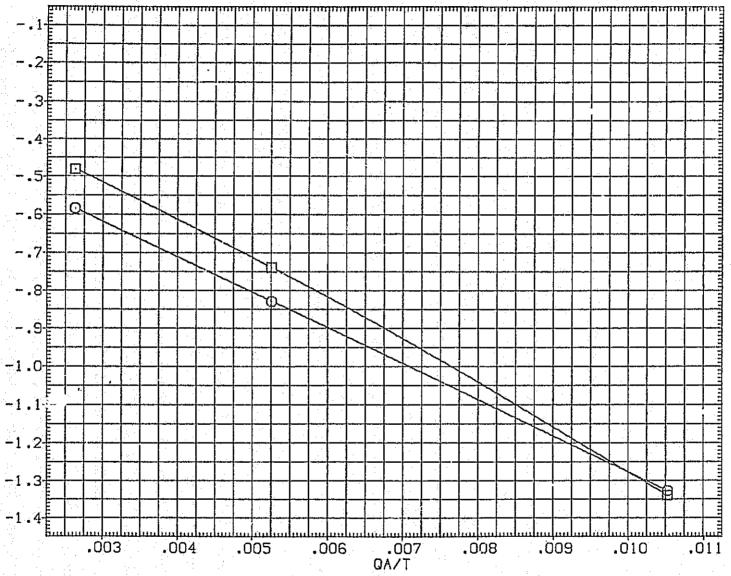
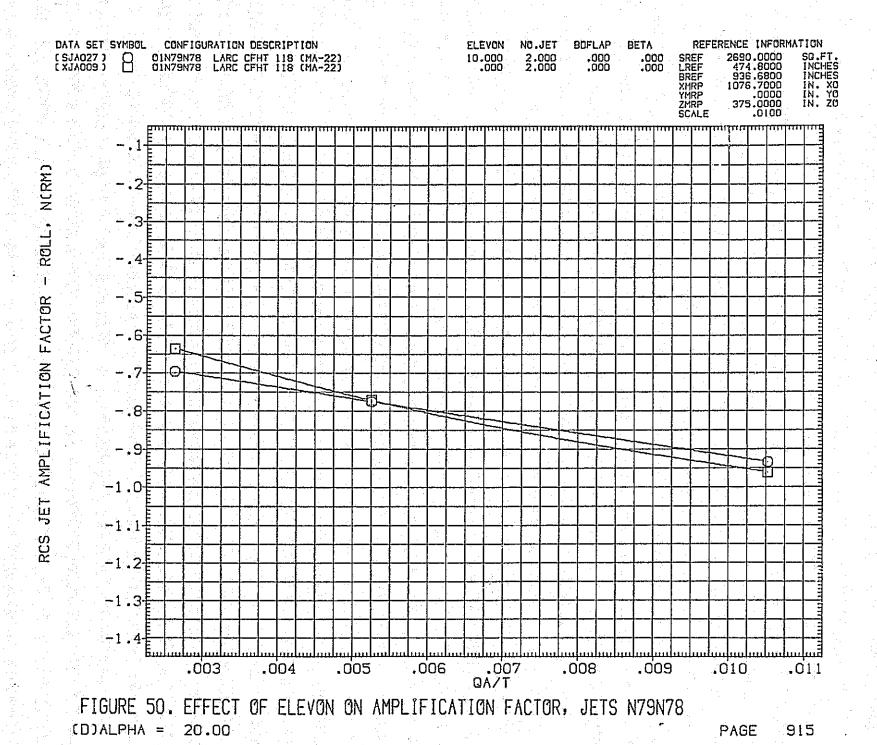


FIGURE 50. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79N78 (C)ALPHA = 10.00



NCRM)

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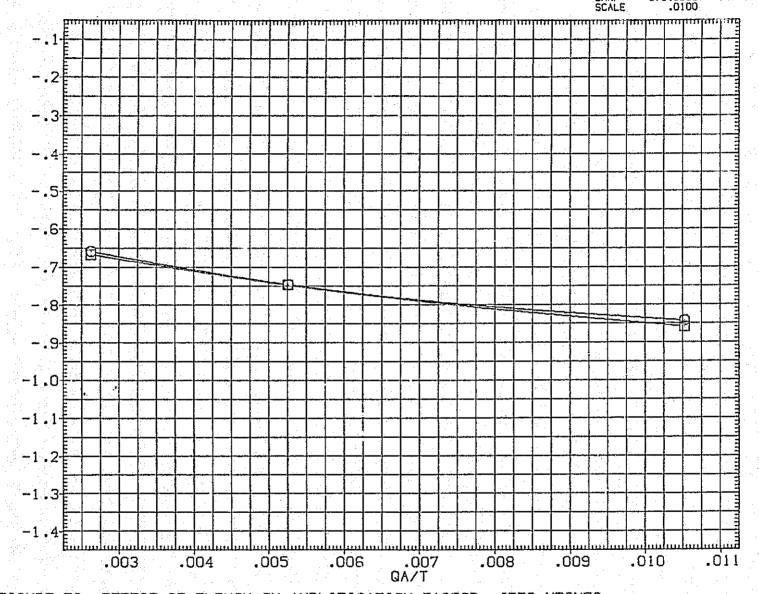


FIGURE 50. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79N78

(E)ALPHA = 35.00

P

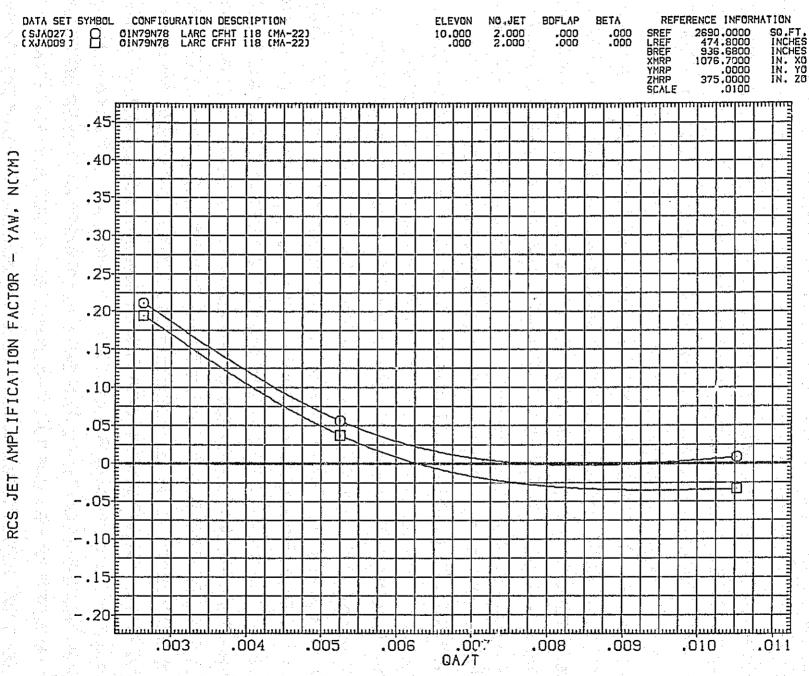


FIGURE 50. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79N78

YAW, NCYM)

FACTOR

AMPL IF ICATION

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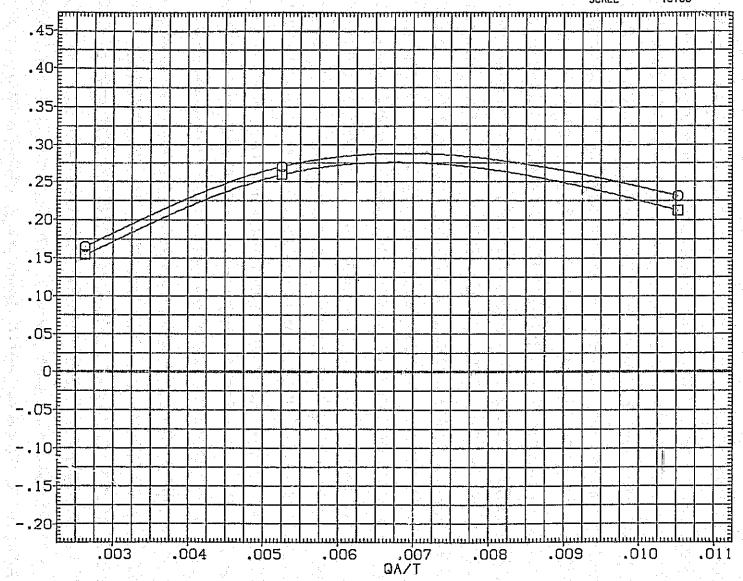


FIGURE 50. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79N78

(B)ALPHA = .00

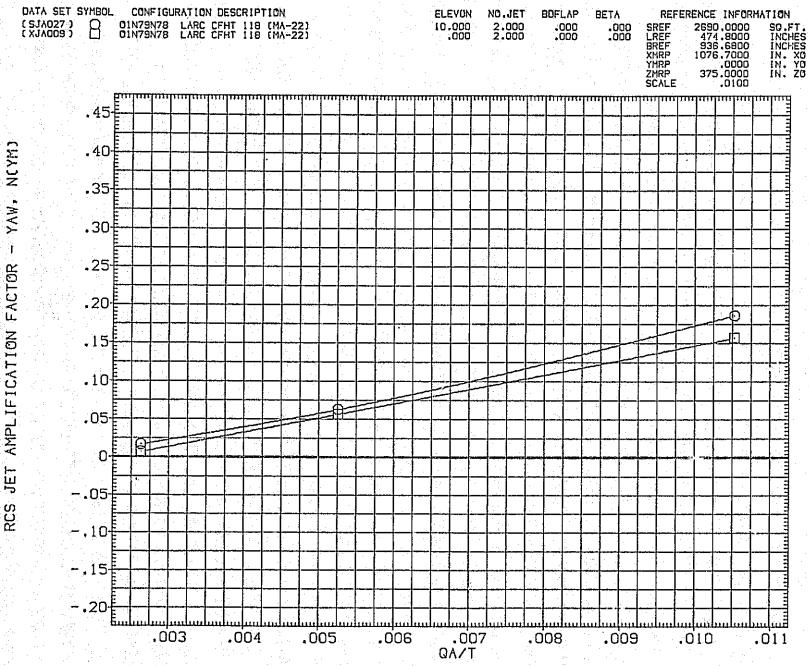


FIGURE 50. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79N78

NCYM3

YAW.

FACTOR

AMPL IF ICATION

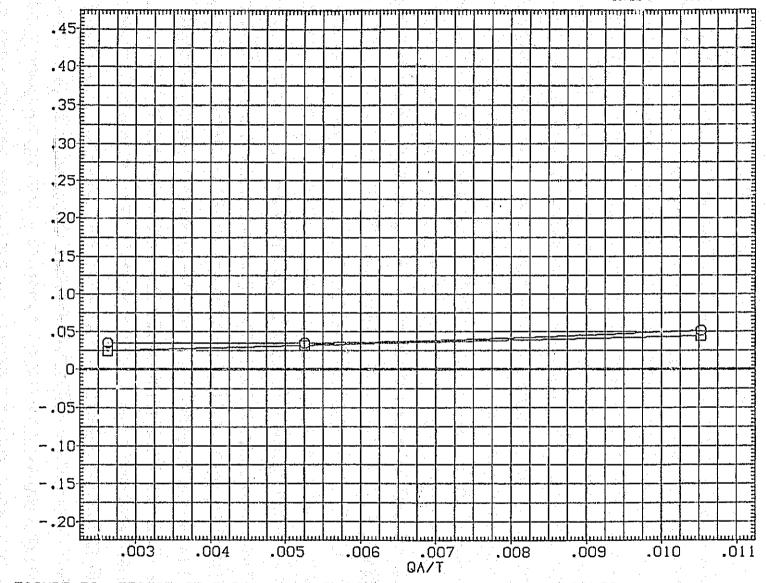


FIGURE 50. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79N78

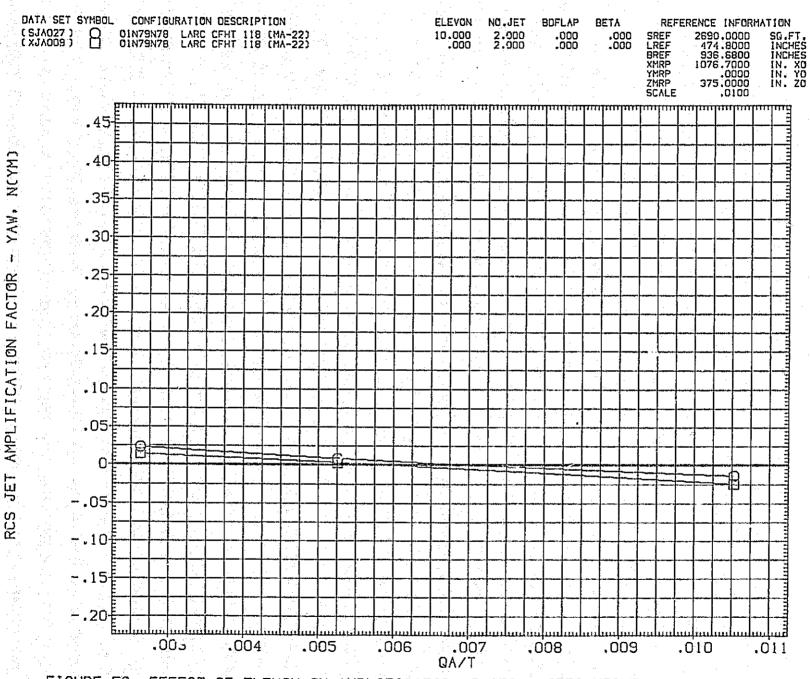


FIGURE 50. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79N78 (E)ALPHA = 35.00

.007 QA/T FIGURE 50. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79N78 (A)ALPHA = -8.00

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.005

- .40 E...

.003

.004

PAGE 922

.011

.010

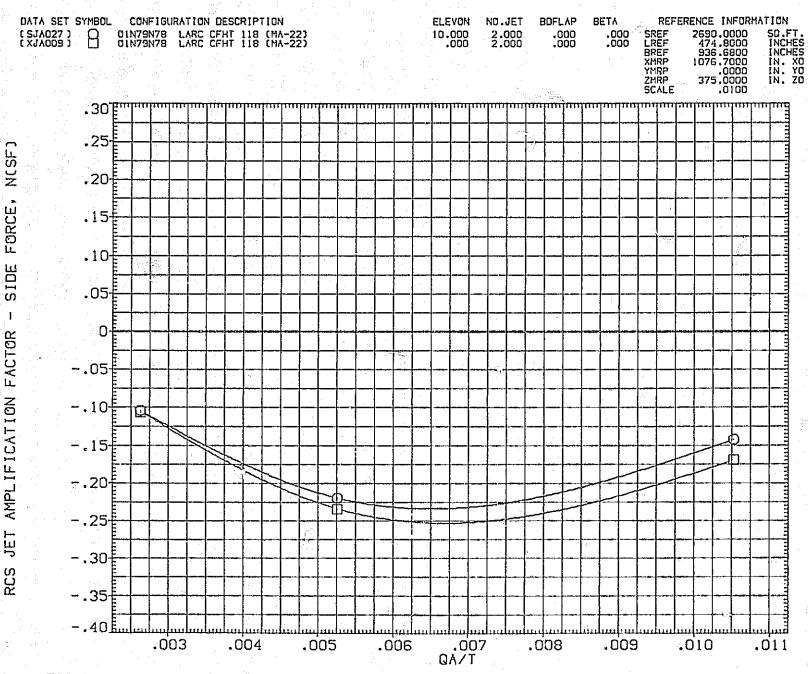
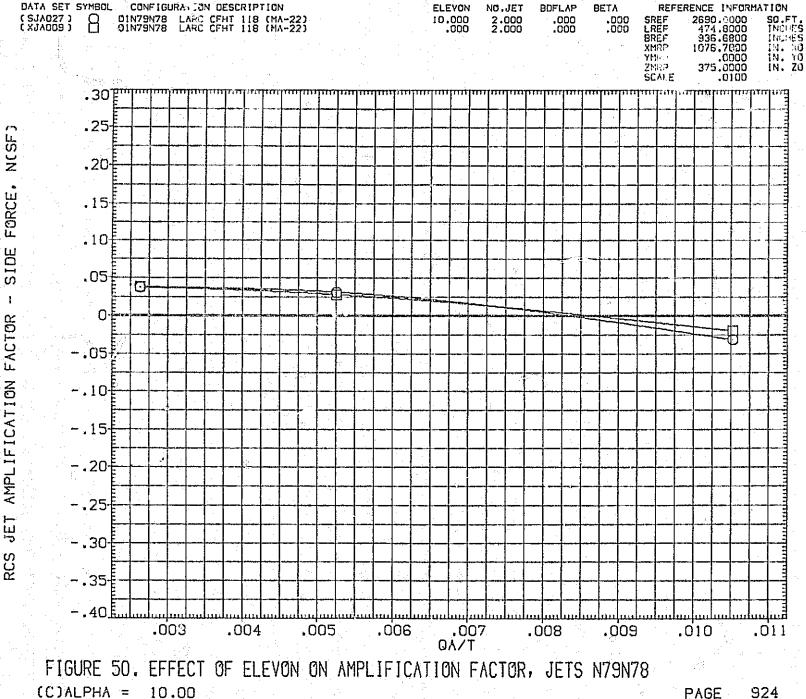


FIGURE 50. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79N78
(B) ALPHA = .00

923



(C)ALPHA = 10.00PAGE

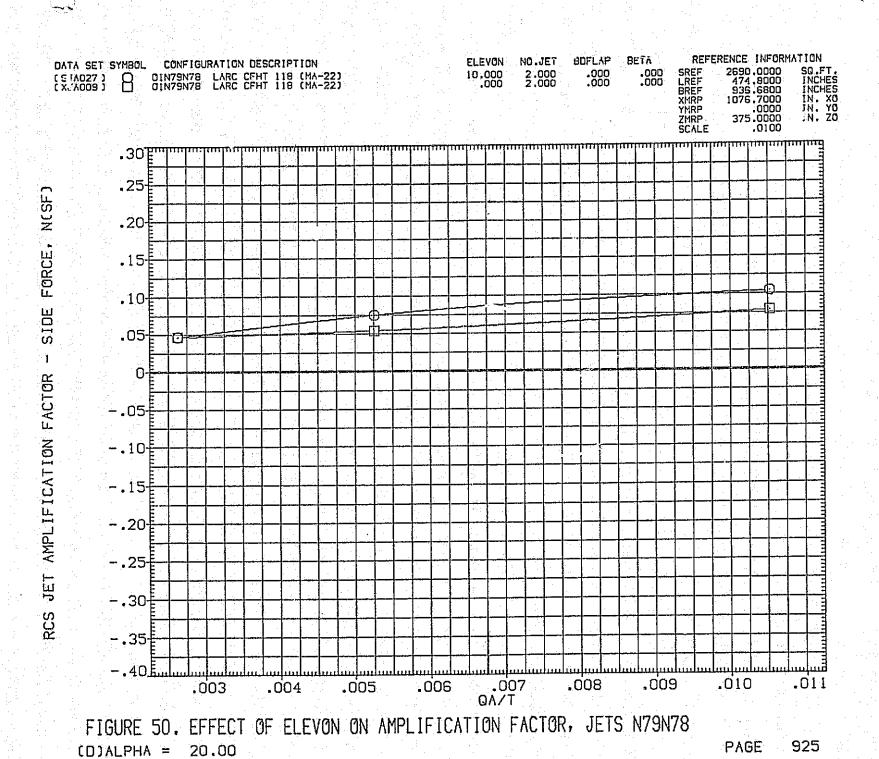
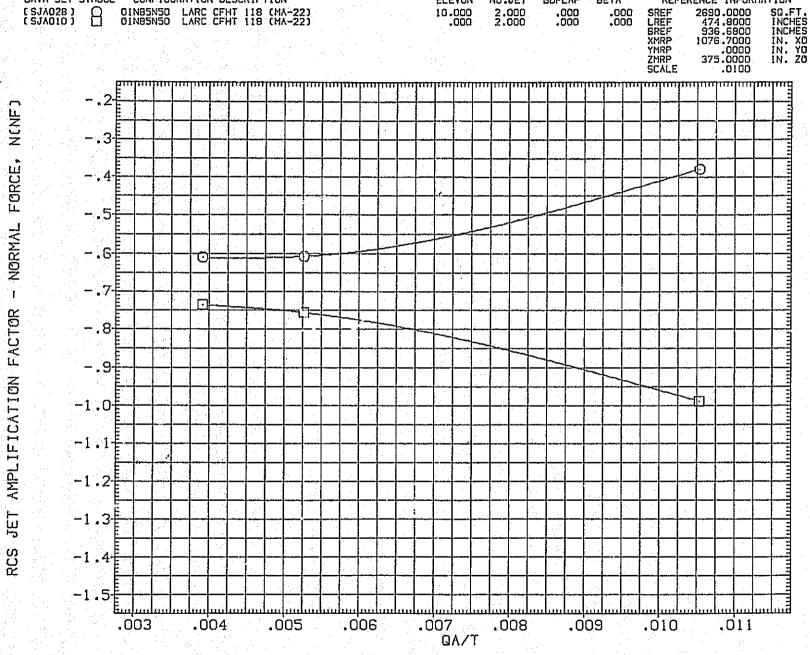


FIGURE 50. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79N78

(E)ALPHA = 35.00

PAGE 926



ELEVON

NO.JET

BDFLAP

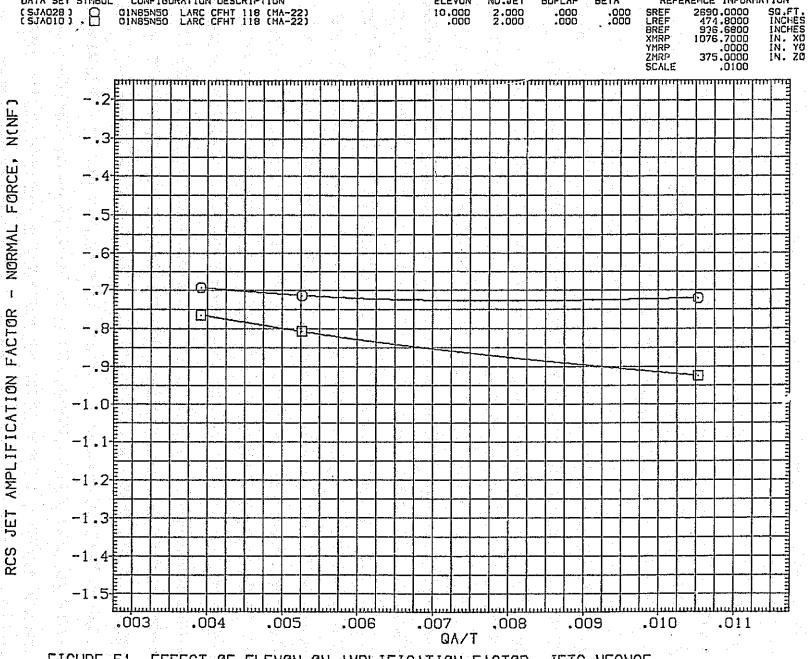
BETA

REFERENCE INFORMATION

DATA SET SYMBOL

CONFIGURATION DESCRIPTION

FIGURE 51. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N50N85



DATA SET SYMBOL CONFIGURATION DESCRIPTION

OIN85N50 LARC CFHT 118 (MA-22) OIN85N50 LARC CFHT 118 (MA-22)

NO.JET 2.000 2.000

ELEVON

BDFLAP

BETA

REFERENCE INFORMATION

FIGURE 51. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N50N85 (B)ALPHA = .00 PAGE 928

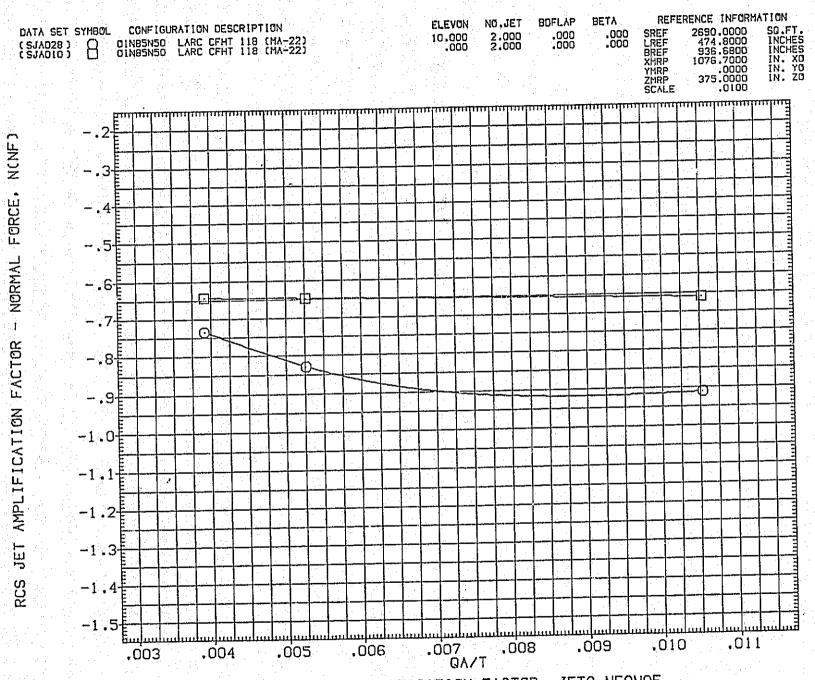


FIGURE 51. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N50N85

FIGURE 51. EFFECT OF ELEVON ON AMPLIFICA ON FACTOR, JETS N50N85

930

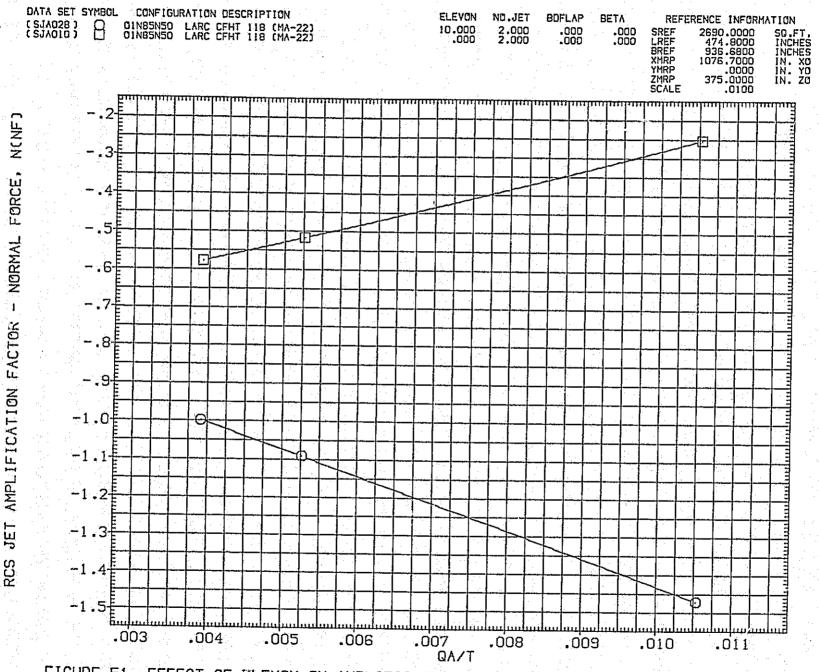


FIGURE 51. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N50N85 (E)ALPHA = 35.00

PITCH,

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FIGURE 51. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N50N85 (A)ALPHA = -8.00

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QA/T

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.011

PAGE 932

.005

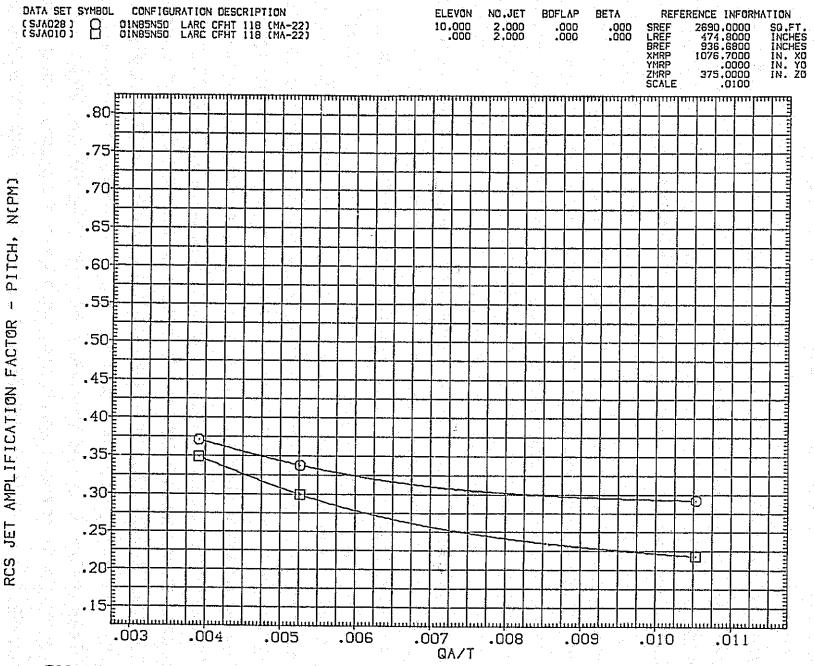


FIGURE 51. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N50N85

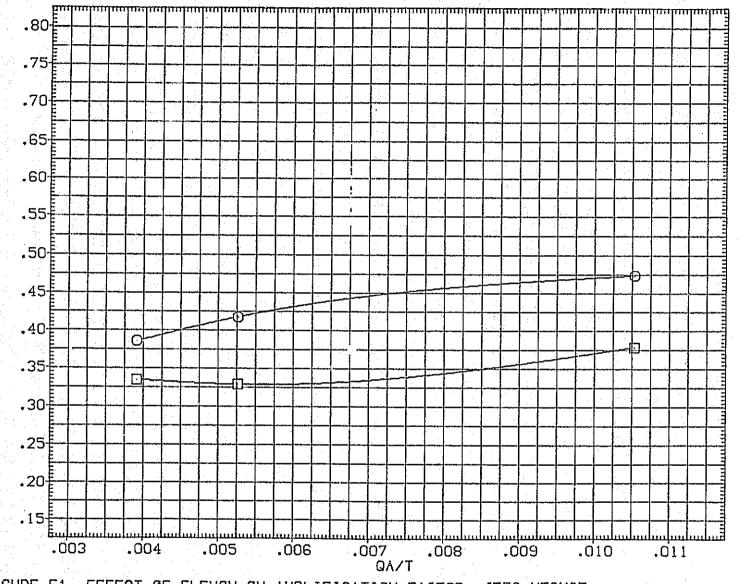


FIGURE 51. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N50N85

CC)ALPHA = 10.00

PAGE 934

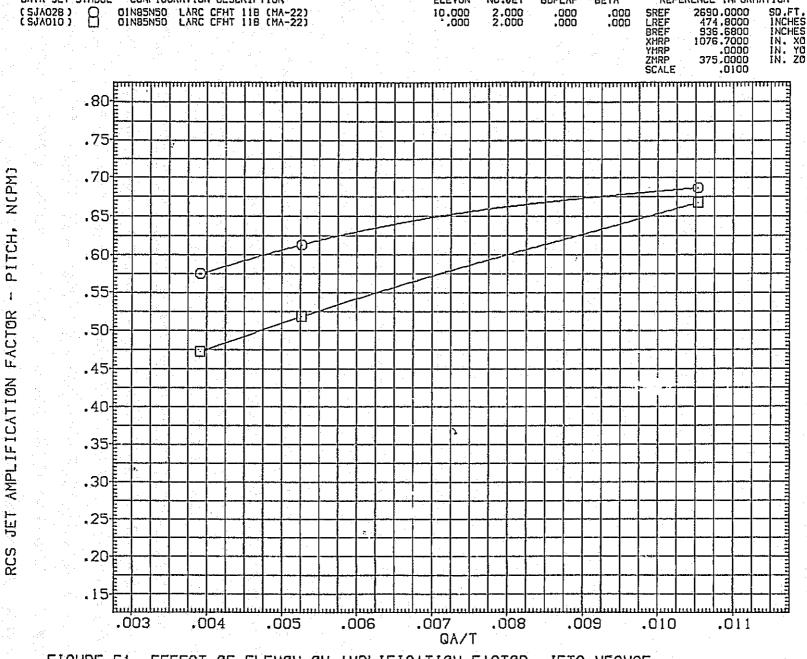
/ ____

NCPM

AMPLIFICATION FACTOR

JET

RCS



NO.JET

BDFLAP

BETA

REFERENCE INFORMATION

935

CONFIGURATION DESCRIPTION

DATA SET SYMBOL

FIGURE 51. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N50N85

CDJALPHA = 20.00

PAGE

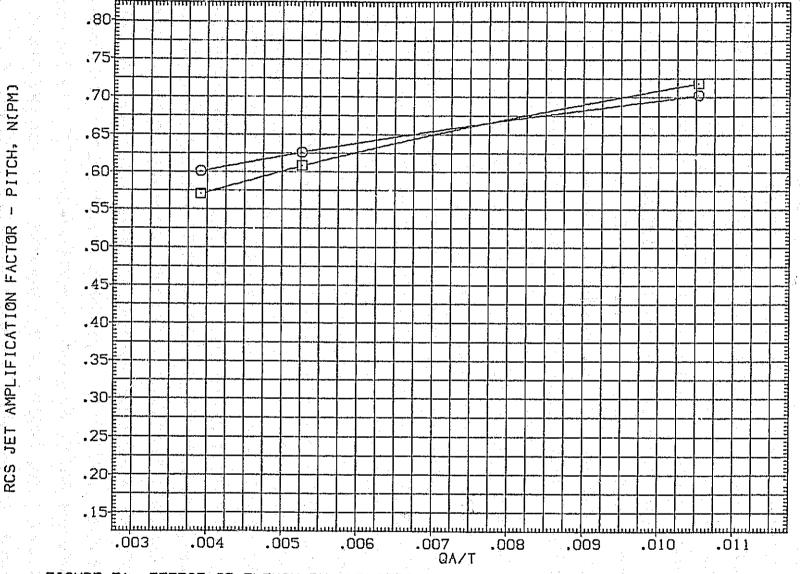


FIGURE 51. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N50N85

936

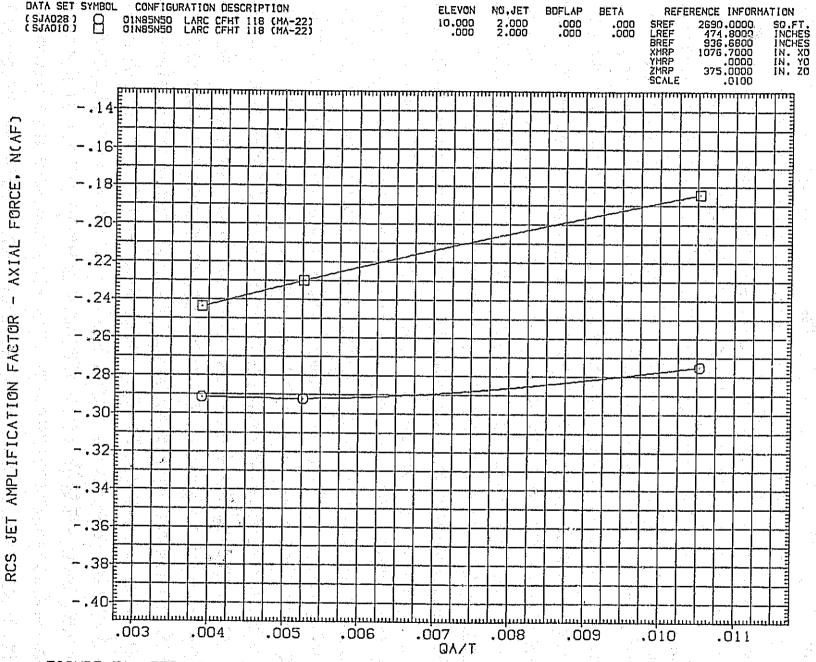
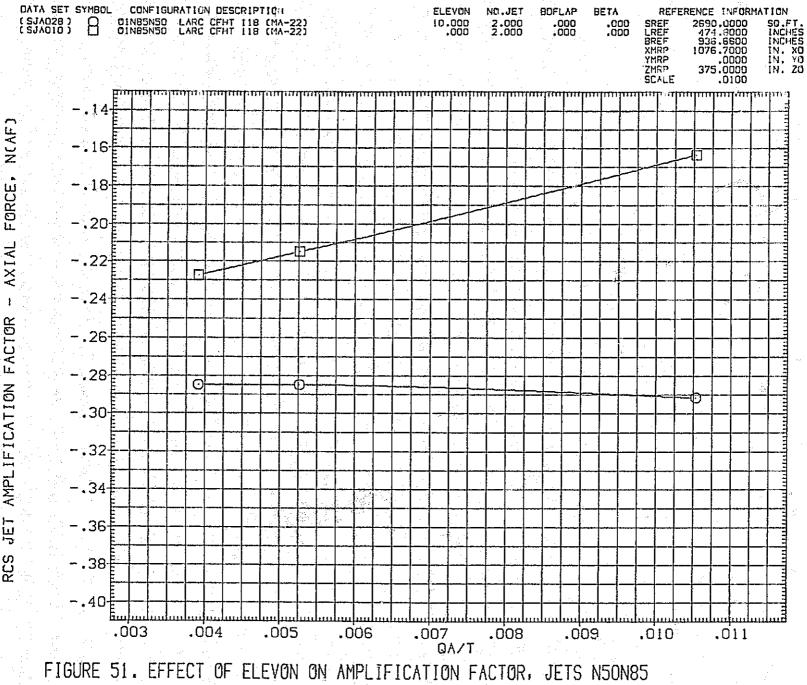


FIGURE 51. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N50N85



ELEVON

NO.JET

BOFLAP

REFERENCE INFORMATION

(B)ALPHA = .00PAGE 938

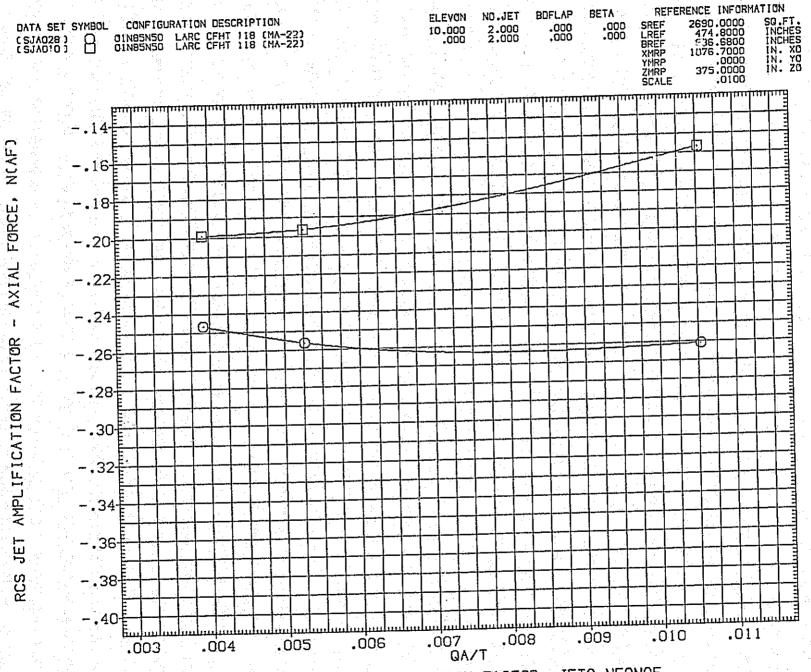


FIGURE 51. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N50N85 (C)ALPHA = 10.00

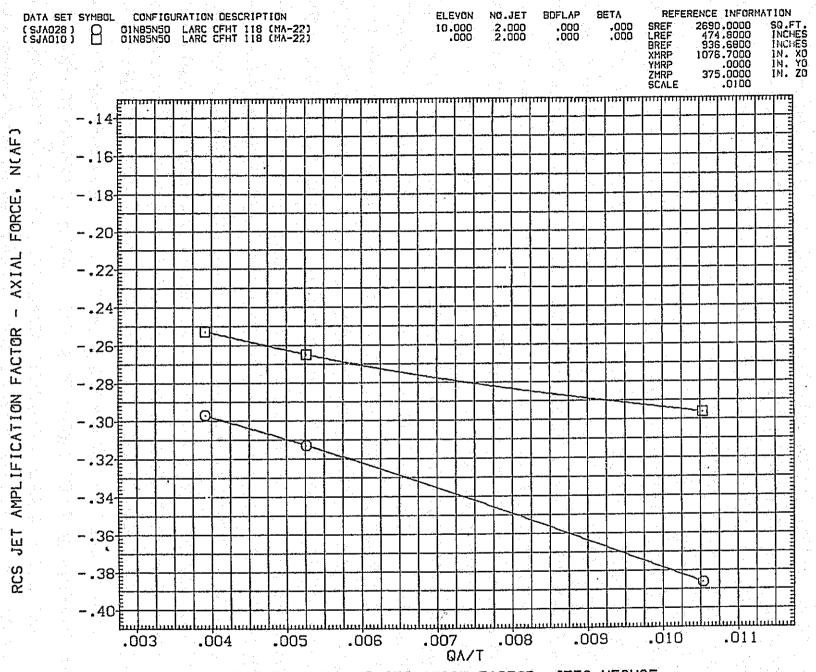


FIGURE 51. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N50N85

(D)ALPHA = 20.00

PAGE

940

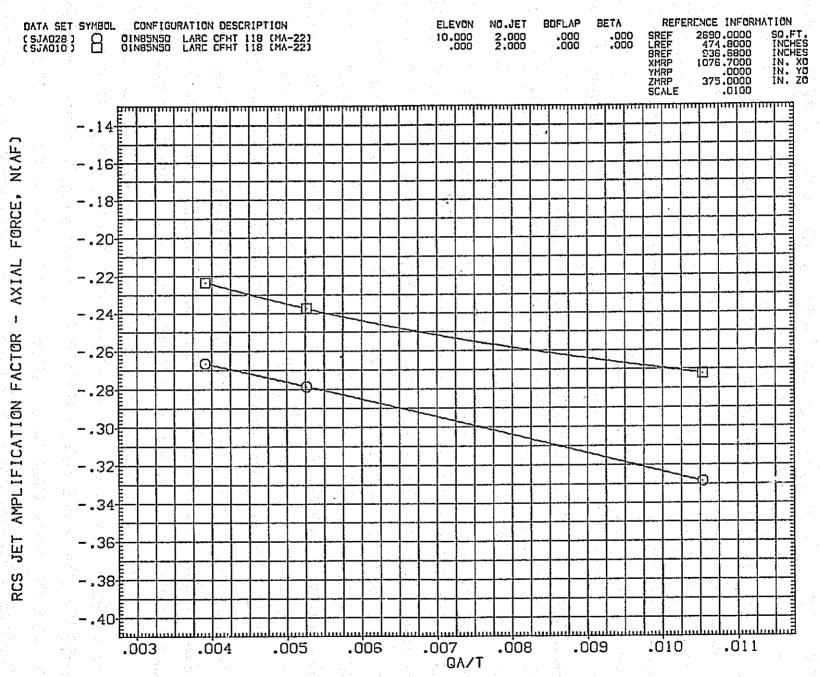


FIGURE 51. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N50N85 (E)ALPHA = 35.00

NCRMJ

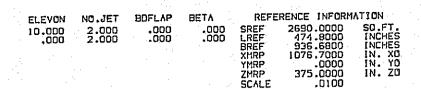
ROLL.

FACTOR

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JET

RCS



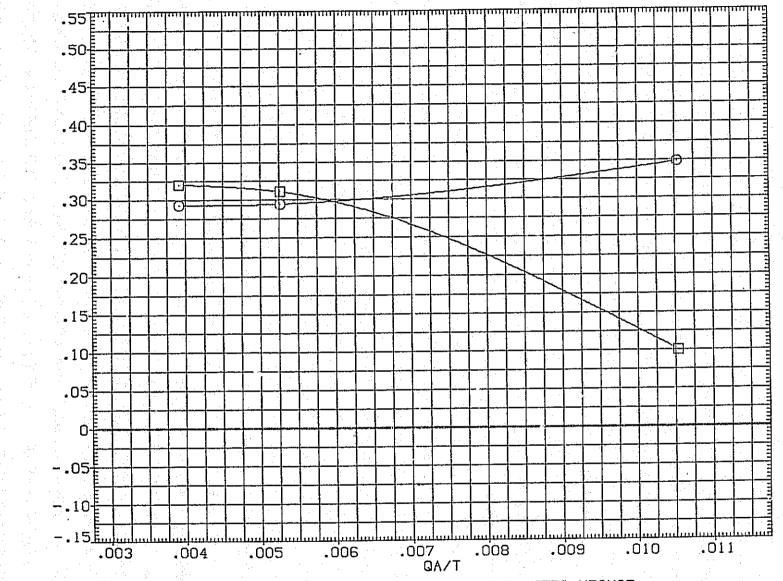


FIGURE 51. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N50N85

(A)ALPHA = -8.00

PAGE 942

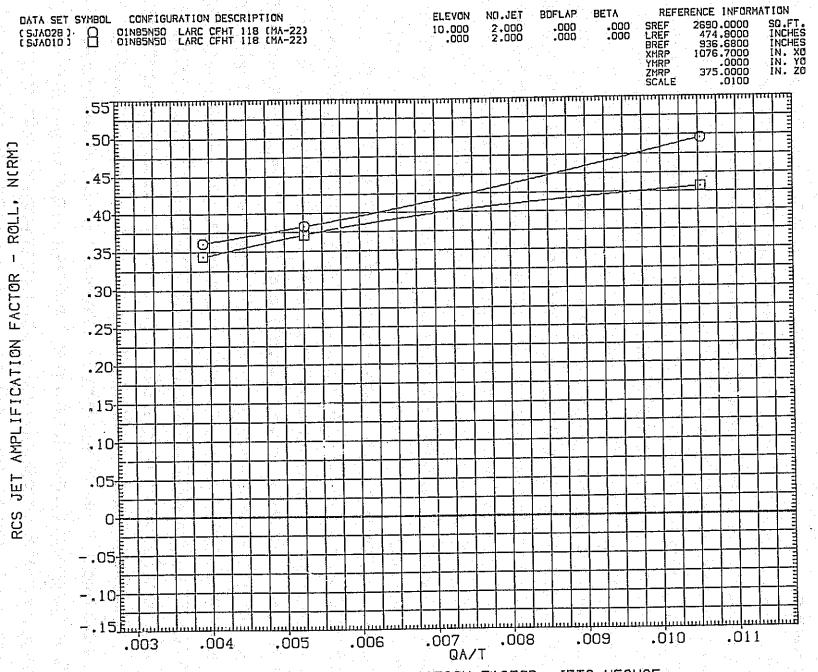


FIGURE 51. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N50N85

(B) ALPHA = .00

PAGE

943

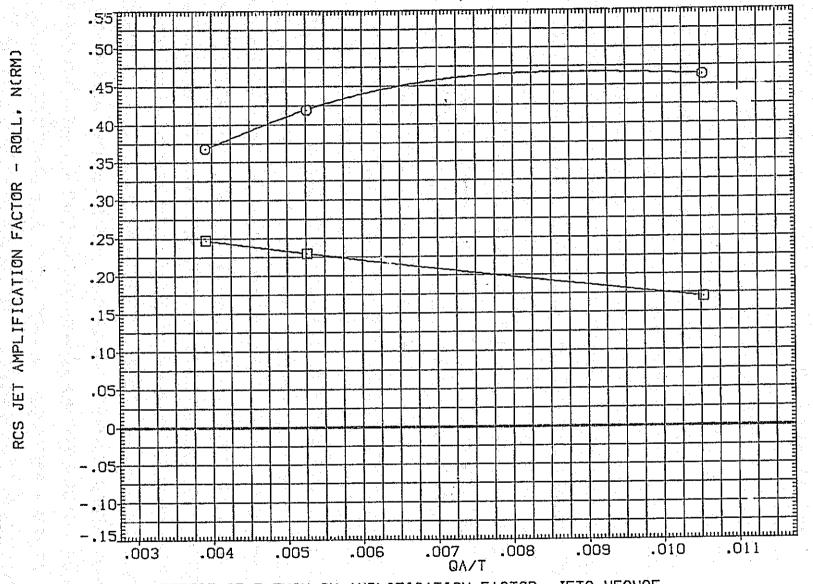


FIGURE 51. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N50N85

(C)ALPHA = 10.00

PAGE 944

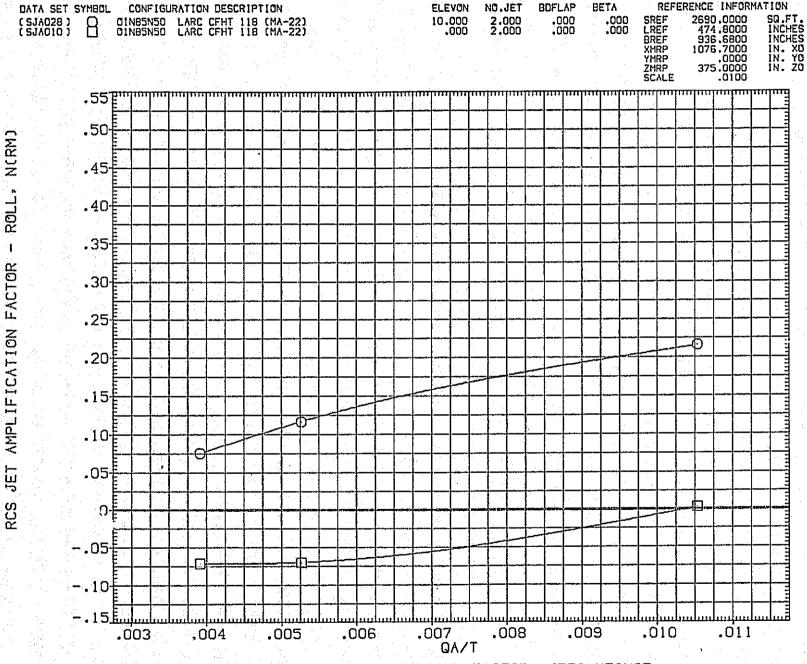


FIGURE 51. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N50N85

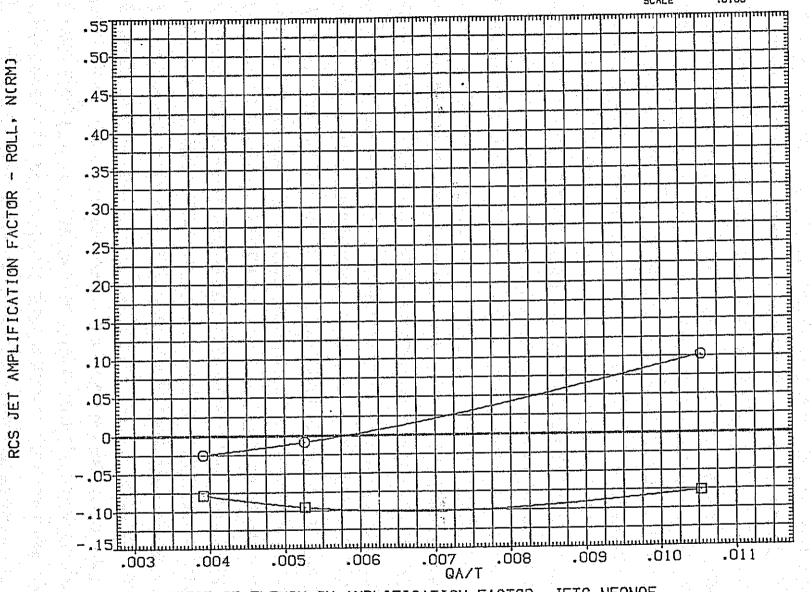


FIGURE 51, EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N50N85

(E)ALPHA = 35.00

PAGE 946

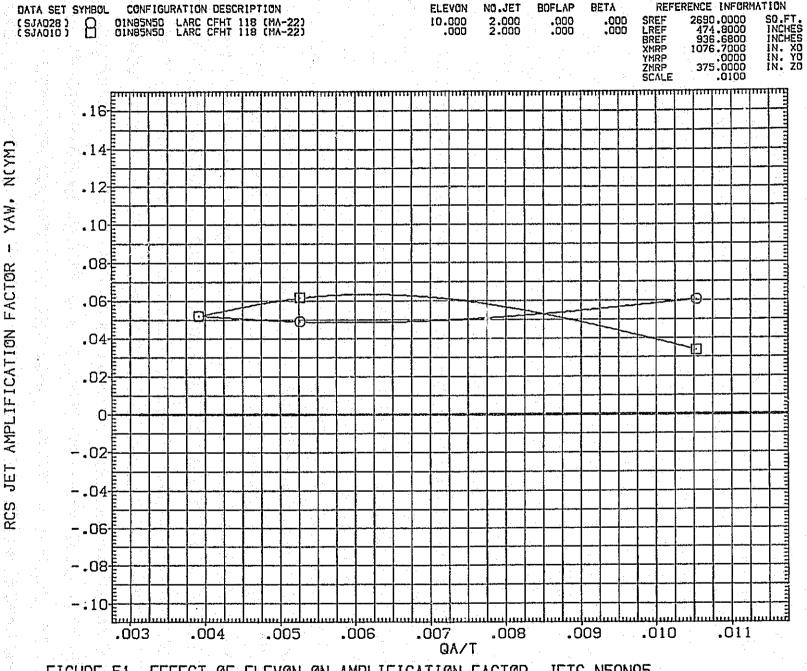


FIGURE 51. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N50N85

(A)ALPHA = -8.00

PAGE 947

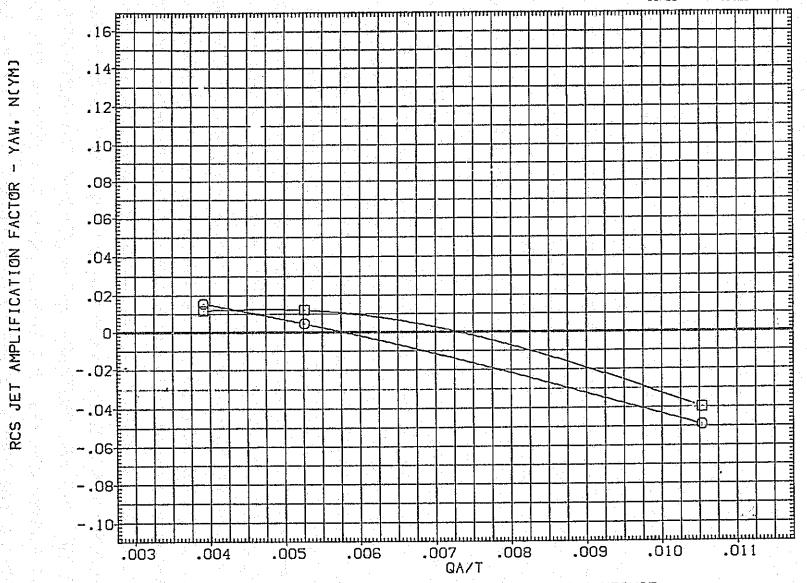


FIGURE 51. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N50N85

(B) ALPHA = .00

PAGE

948

FIGURE 51. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N50N85

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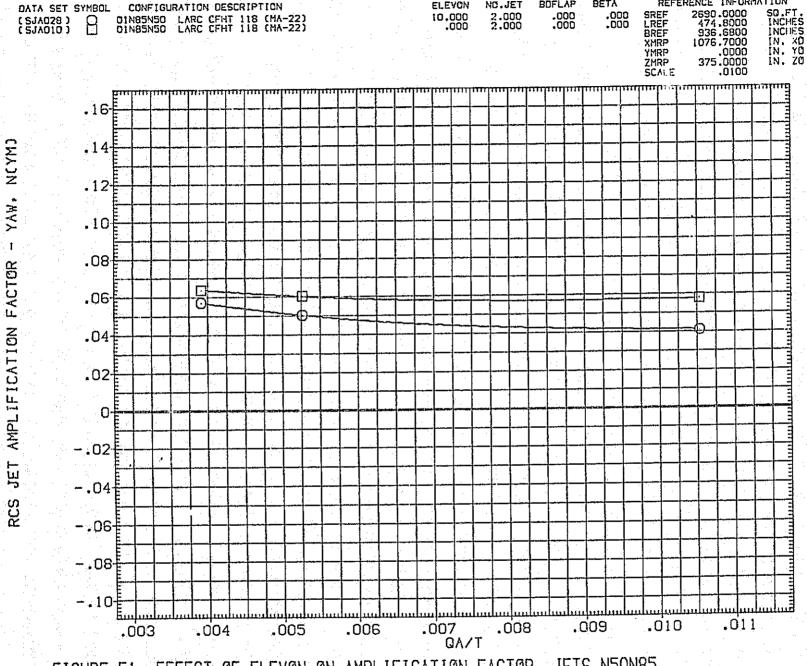
,010

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REFERENCE INFORMATION

950

BOFLAP

NO.JET

ELEVON

DATA SET SYMBOL

CONFIGURATION DESCRIPTION

BETA

FIGURE 51. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N50N85 PAGE (D)ALPHA = 20.00

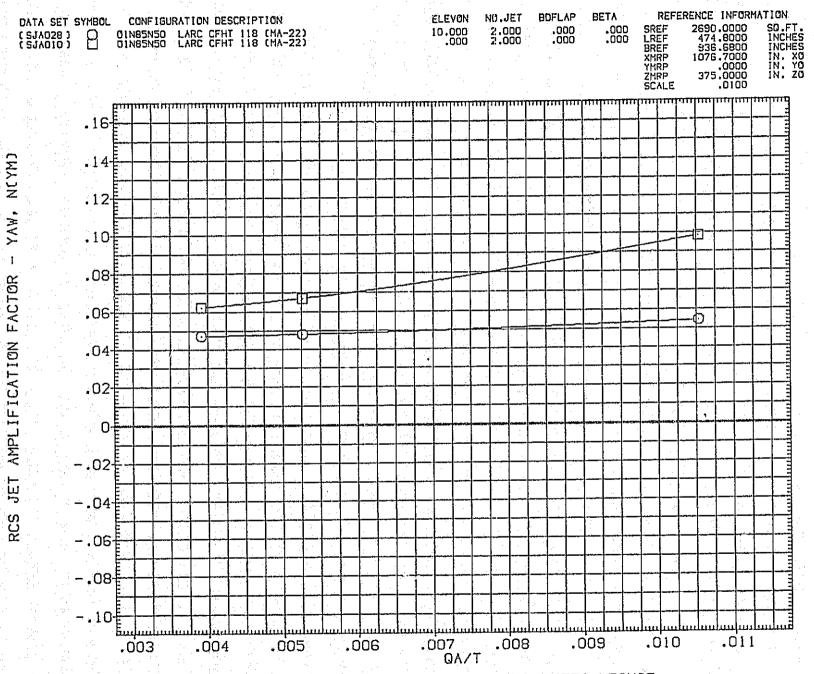
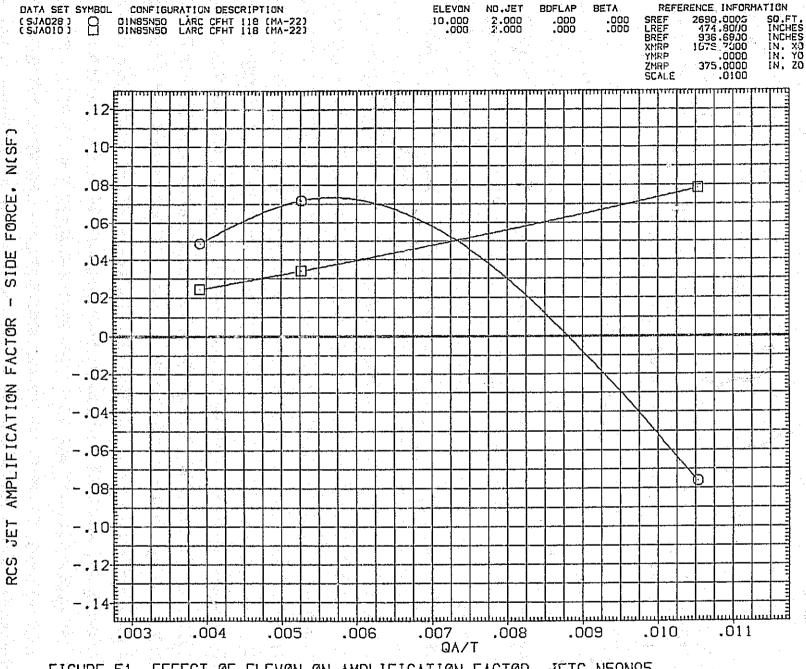


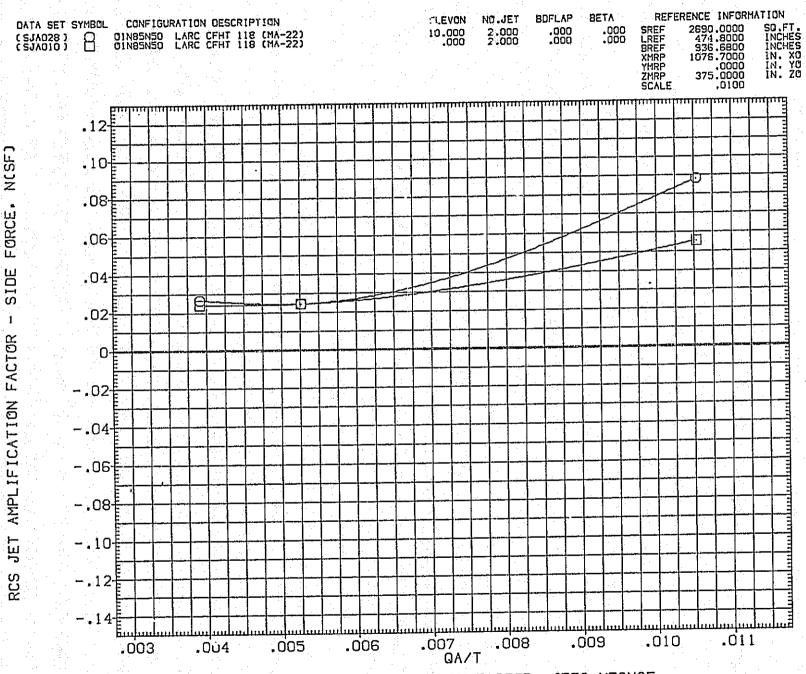
FIGURE 51. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N50N85
(E)ALPHA = 35.00



REFERENCE INFORMATION

FIGURE 51. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N50N85 PAGE 952 (A)ALPHA = -8.00





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FIGURE 51. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N50N85

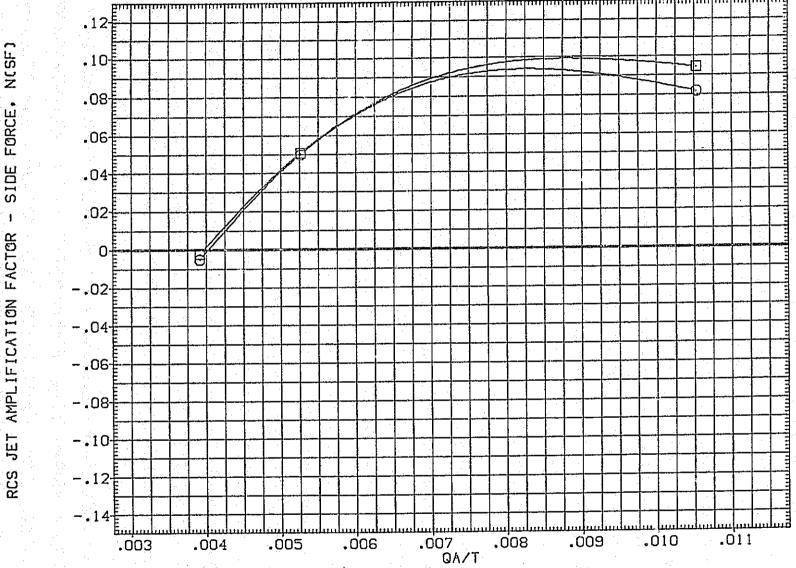


FIGURE 51. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N50N85 (C)ALPHA = 10.00

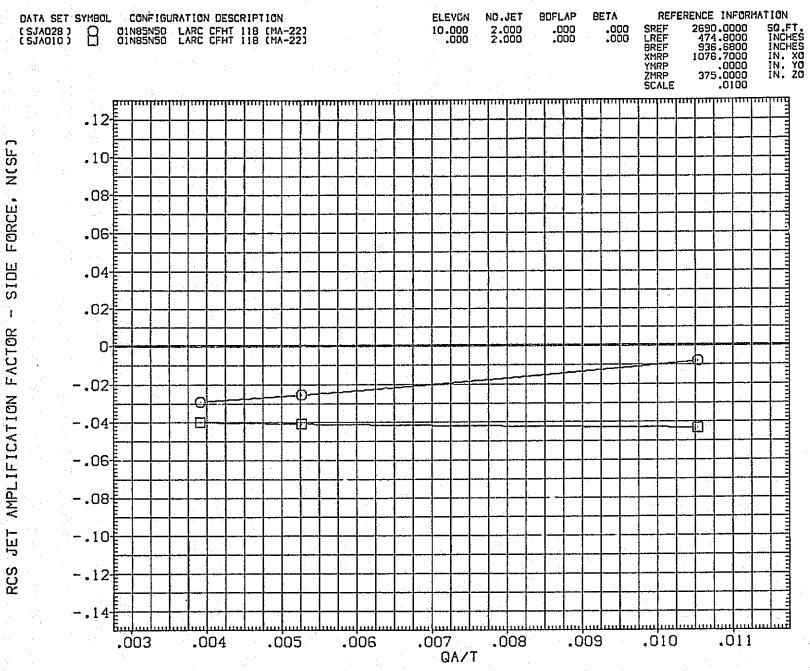


FIGURE 51. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N50N85

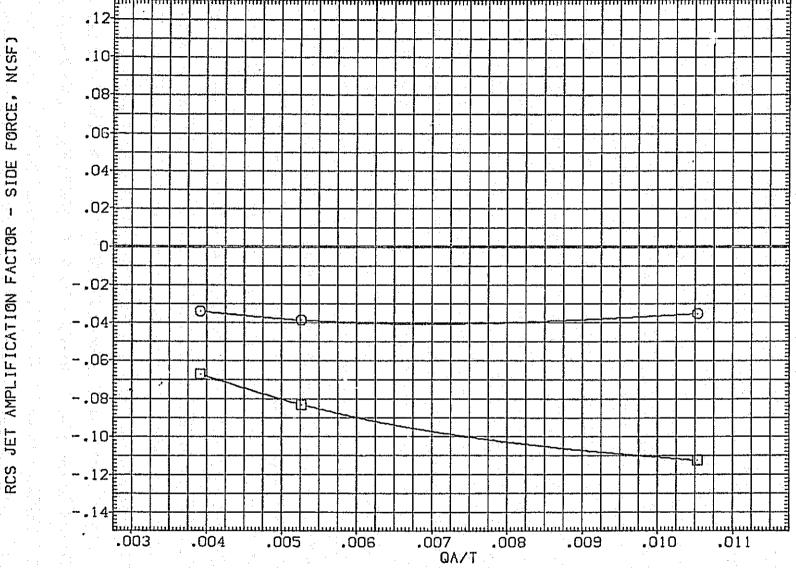


FIGURE 51. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N50N85

(E)ALPHA = 35.00 PAGE 956

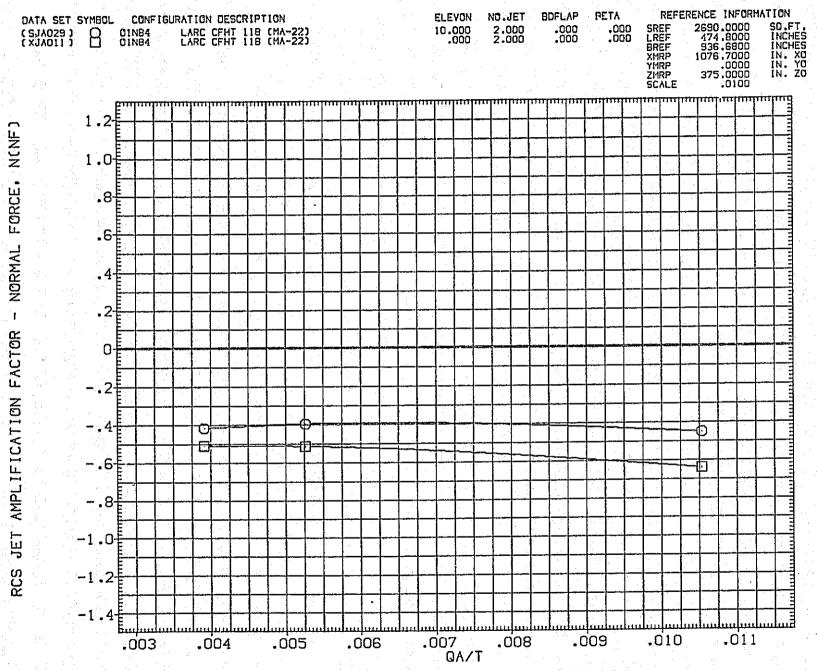
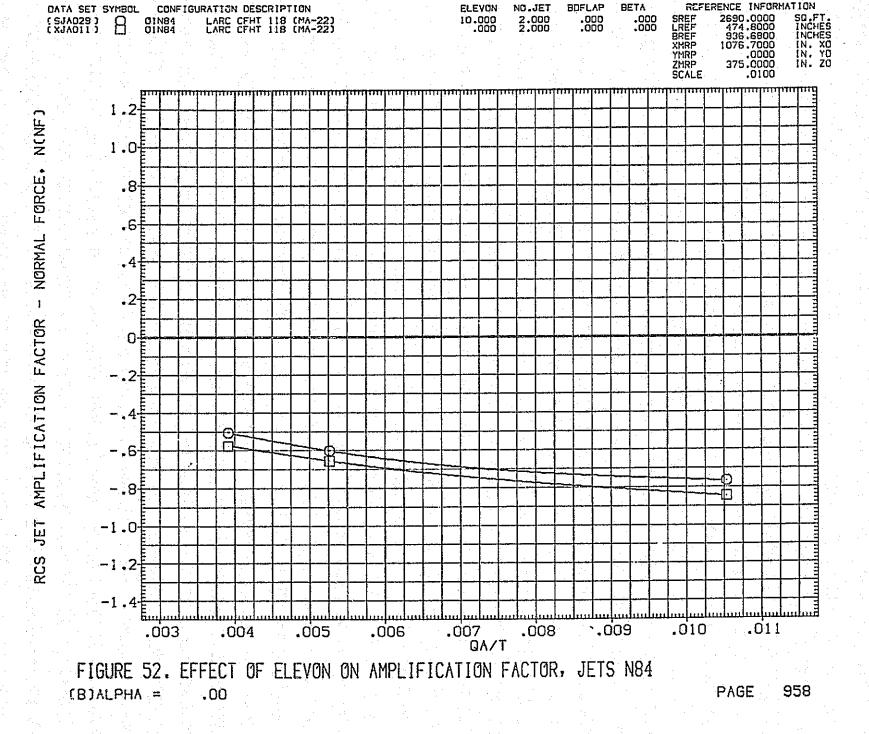


FIGURE 52. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N84

957



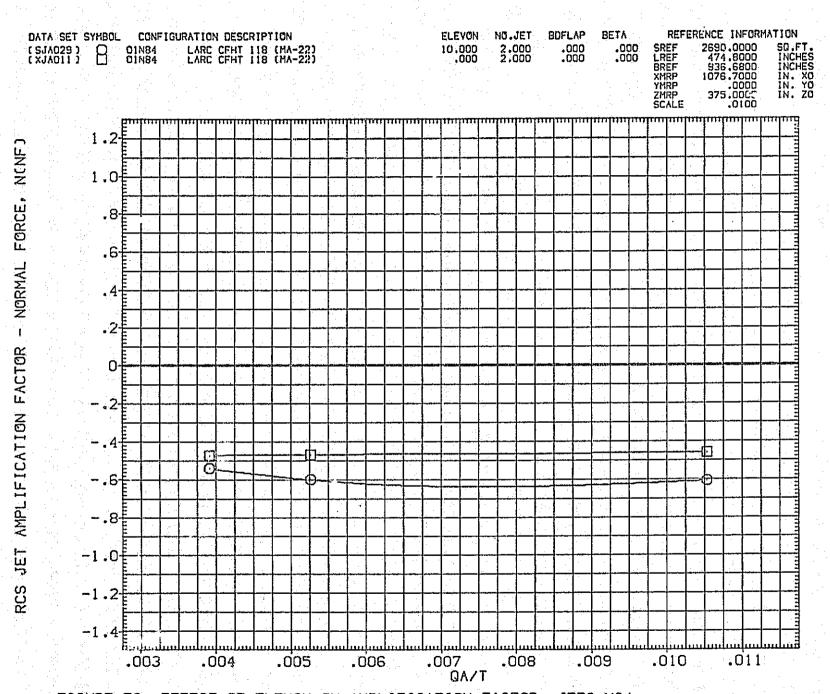


FIGURE 52. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N84

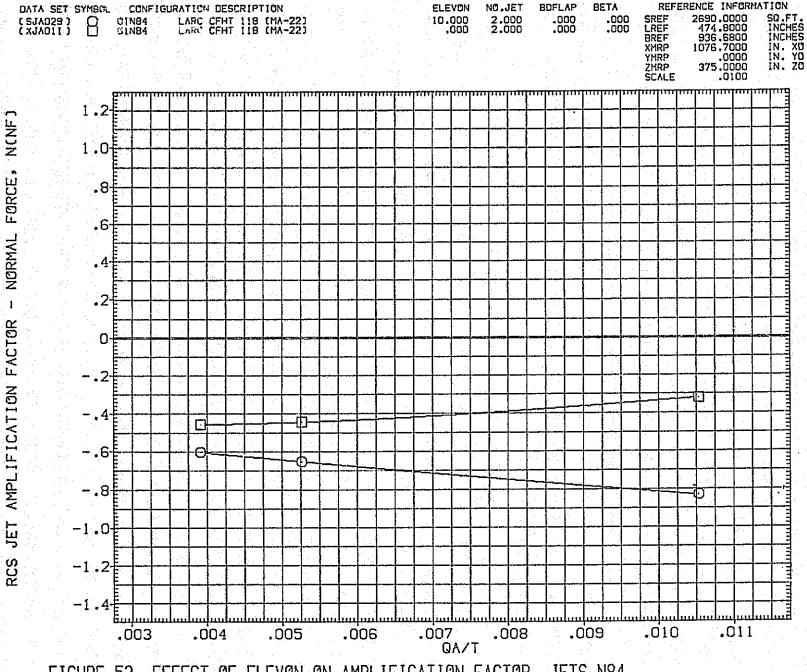


FIGURE 52. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N84 (D)ALPHA = 20.00

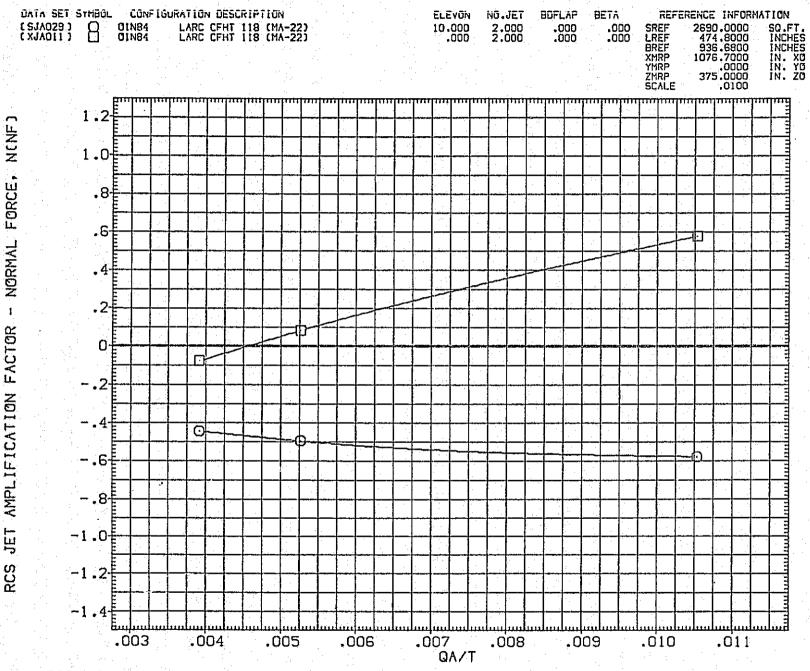


FIGURE 52. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N84
(E)ALPHA = 35.00

FIGURE 52. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N84

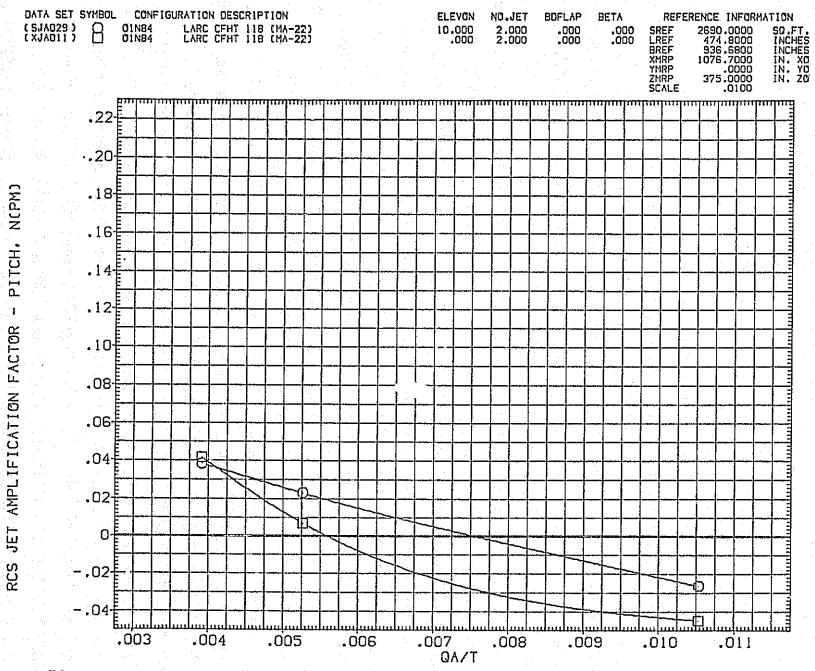


FIGURE 52. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N84
(B) ALPHA = .00

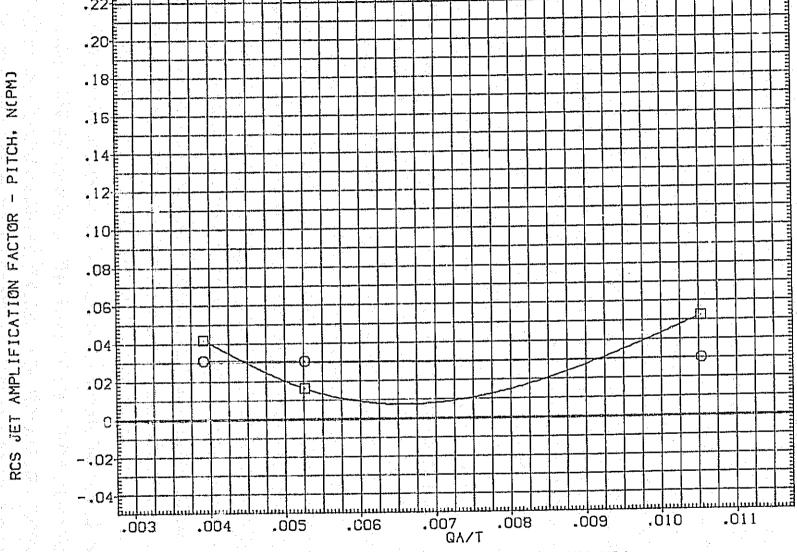
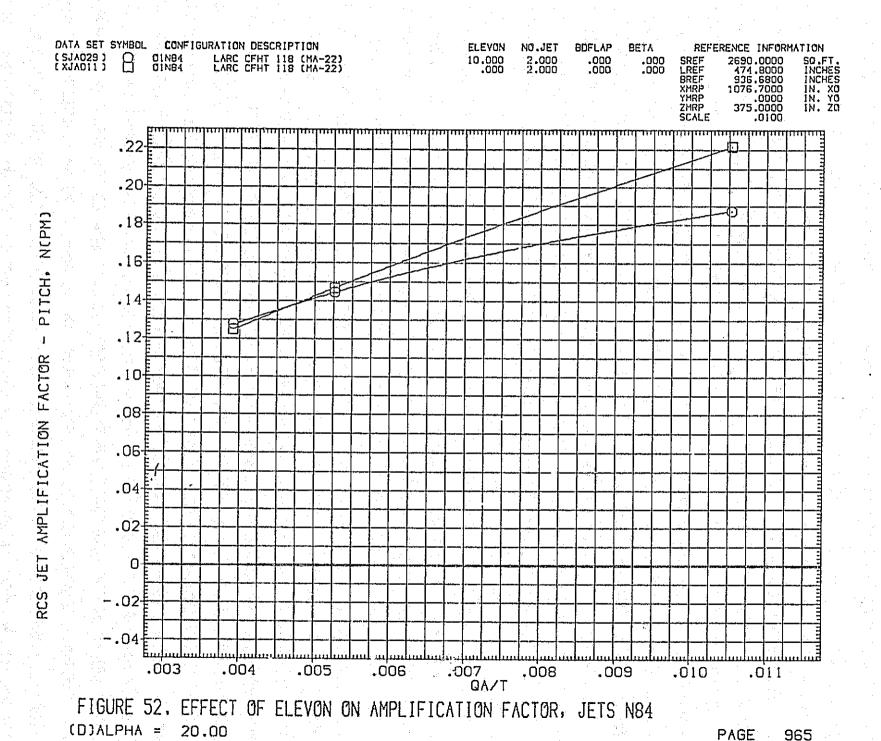
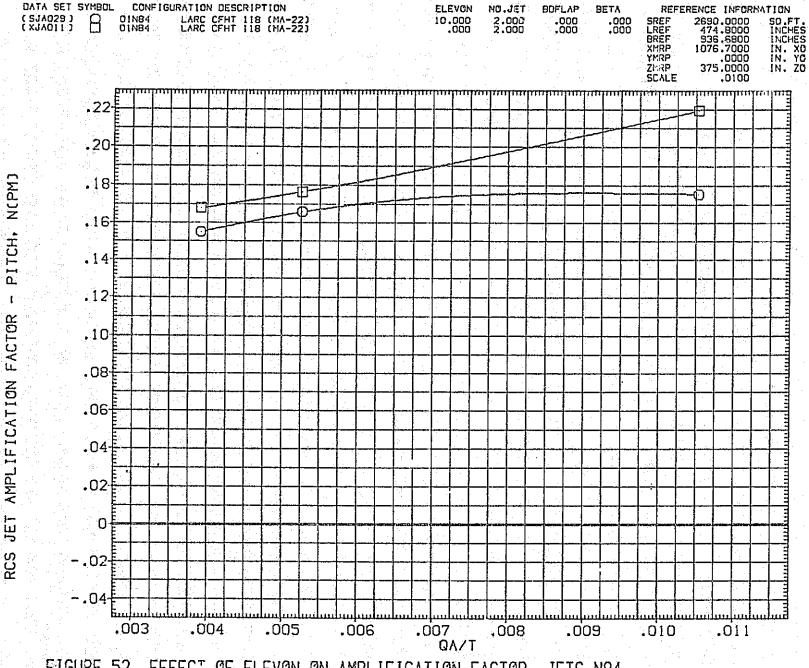


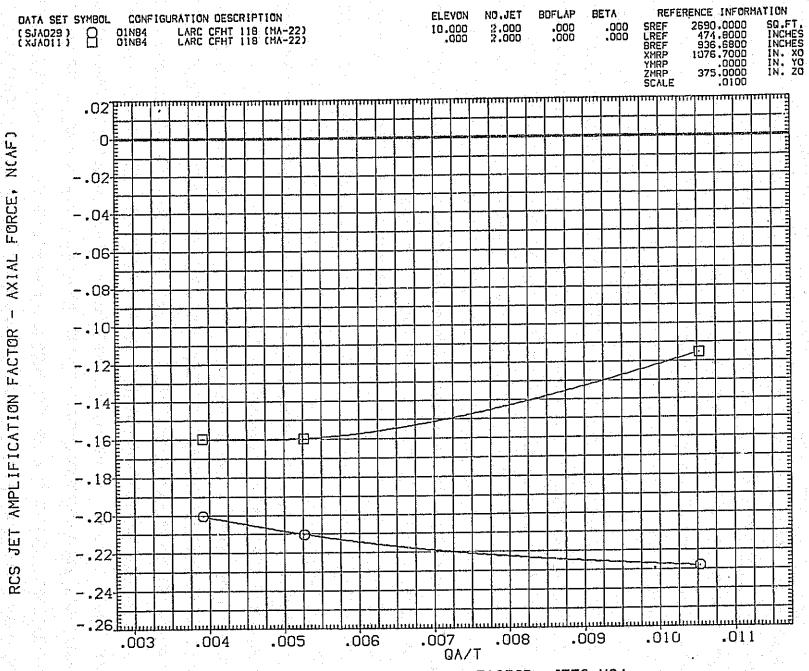
FIGURE 52. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N84





966

FIGURE 52. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N84
(EDALPHA = 35.00



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FIGURE 52. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N84

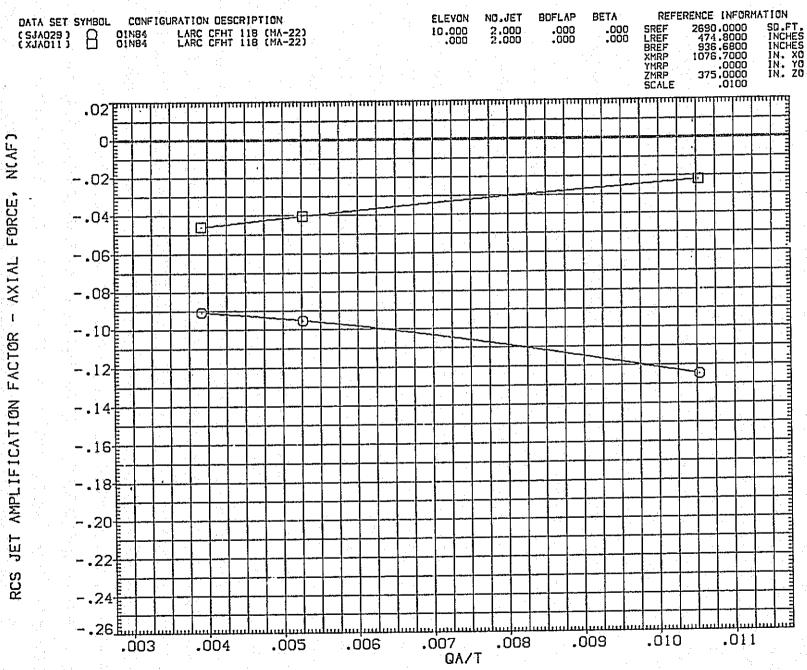


FIGURE 52. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N84
(C)ALPHA = 10.00

FIGURE 52. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N84

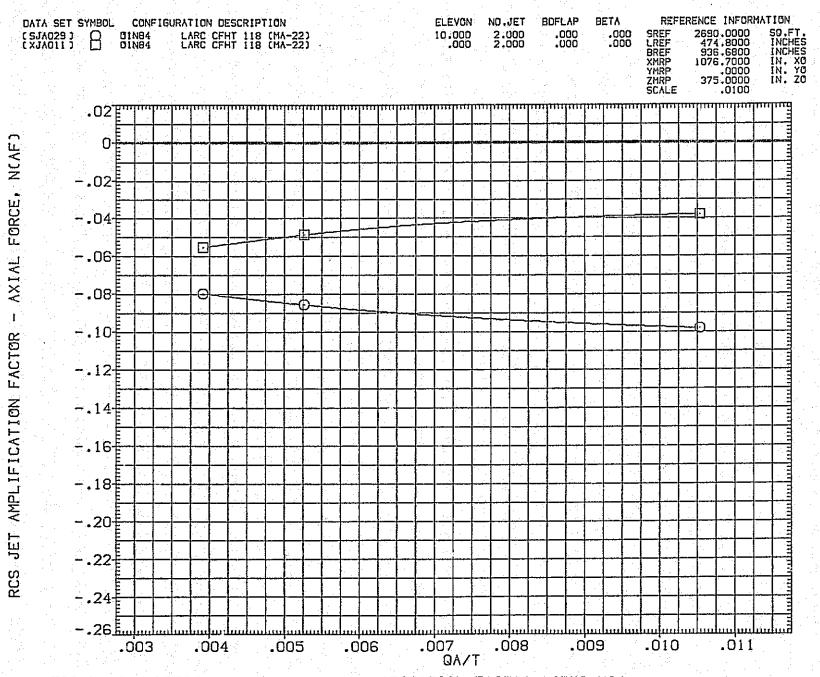
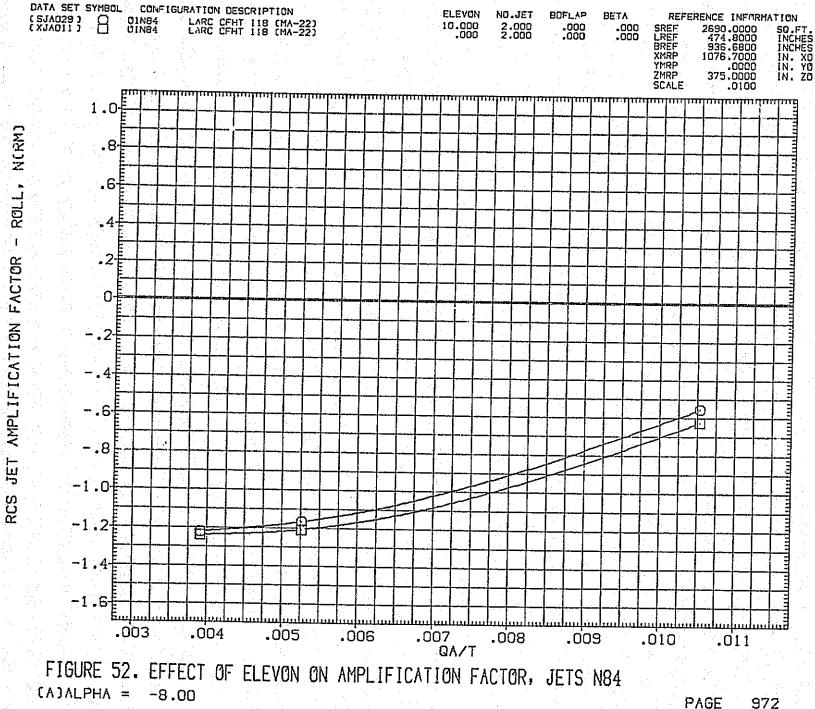


FIGURE 52. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N84

CEDALPHA = 35.00



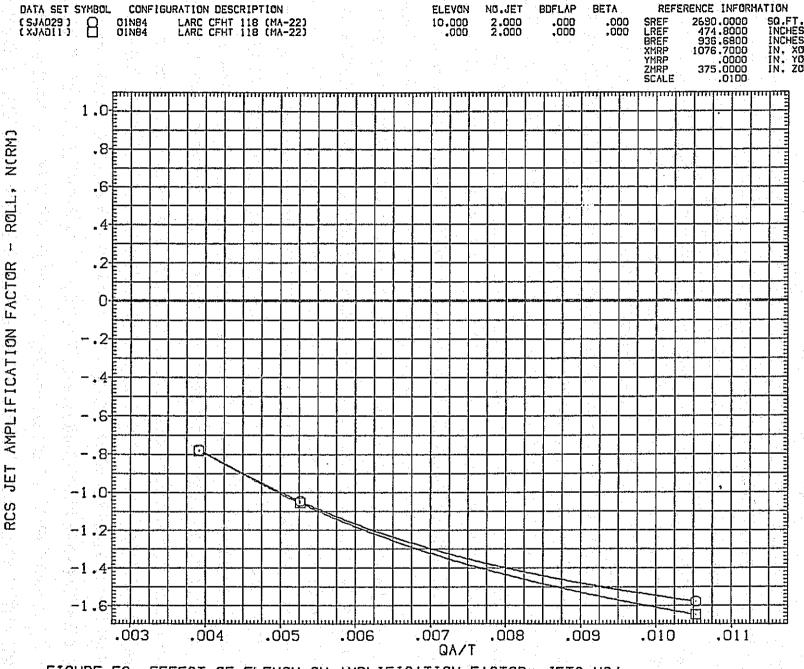


FIGURE 52. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N84

FIGURE 52. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N84

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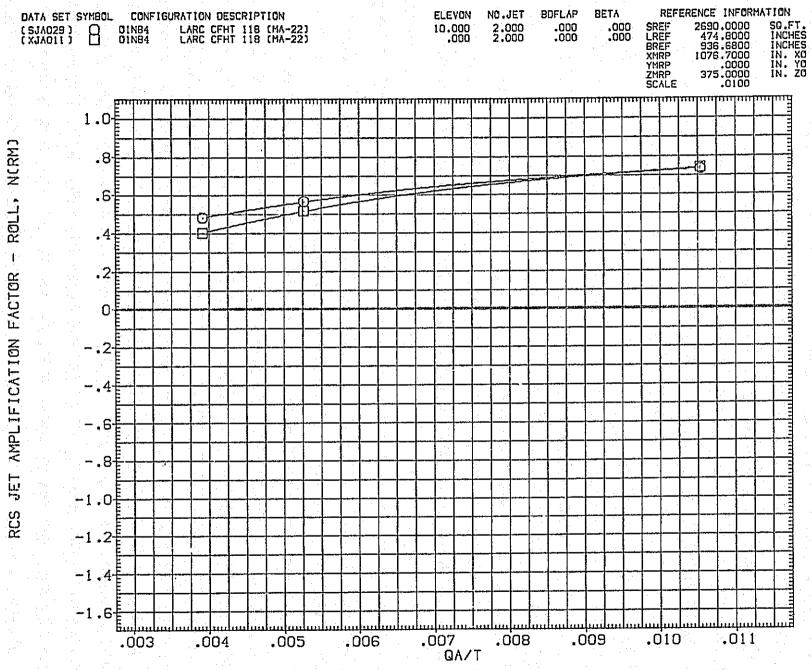


FIGURE 52. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N84 (D)ALPHA = 20.00

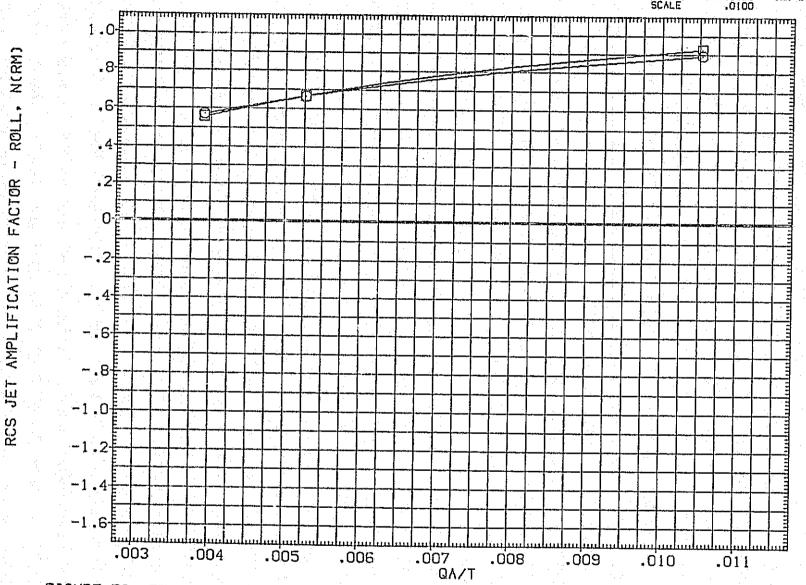
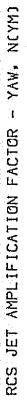


FIGURE 52. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N84
(E)ALPHA = 35.00

FIGURE 52. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N84



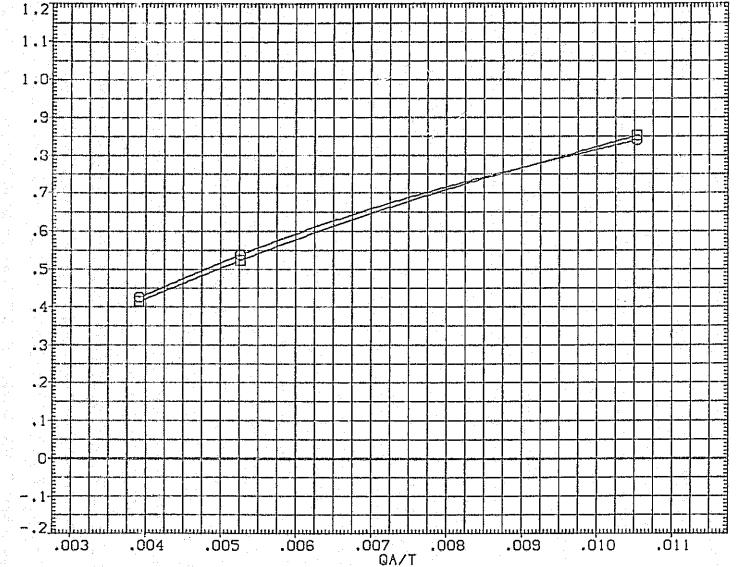


FIGURE 52. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N84.

(B)ALPHA = .00

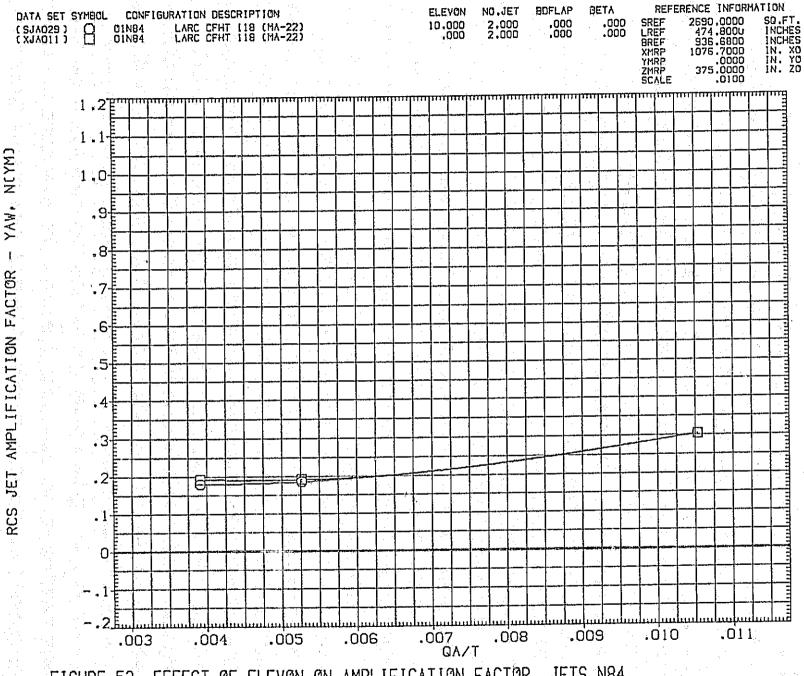
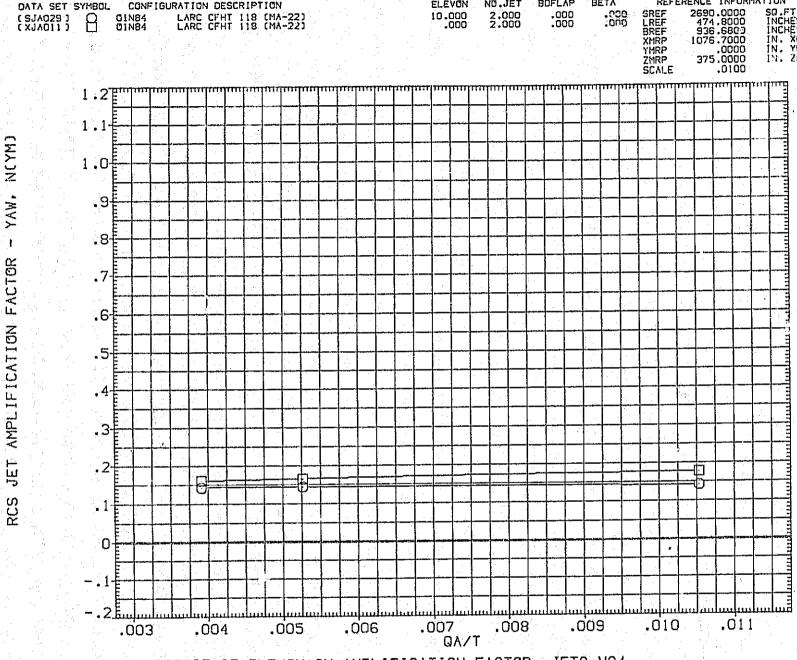


FIGURE 52. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N84



NO.JET

ELEVON

BDFLAP

FIGURE 52. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N84 (D)ALPHA = 20.00

CONFIGURATION DESCRIPTION

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REFERENCE INFORMATION

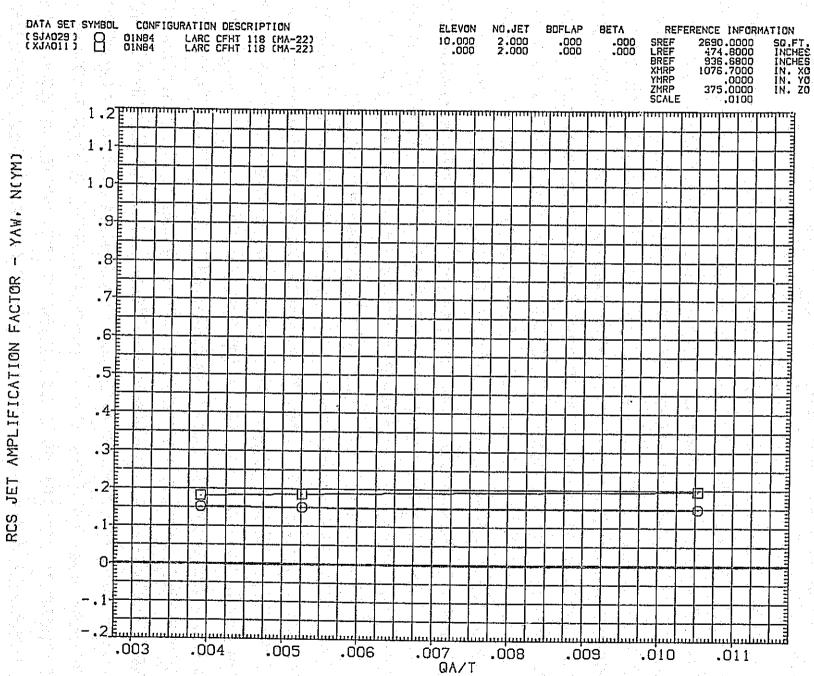


FIGURE 52. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N84
(E)ALPHA = 35.00

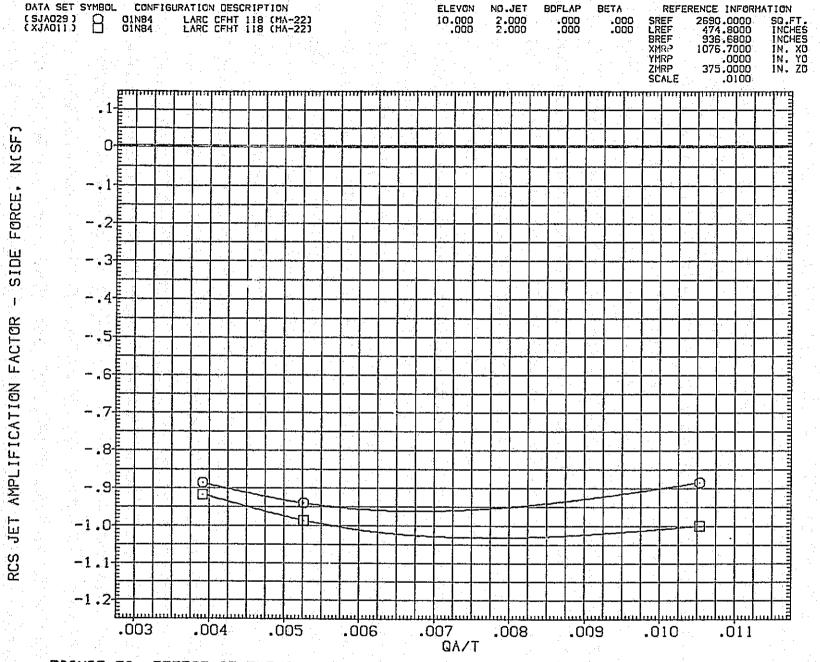


FIGURE 52. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N84

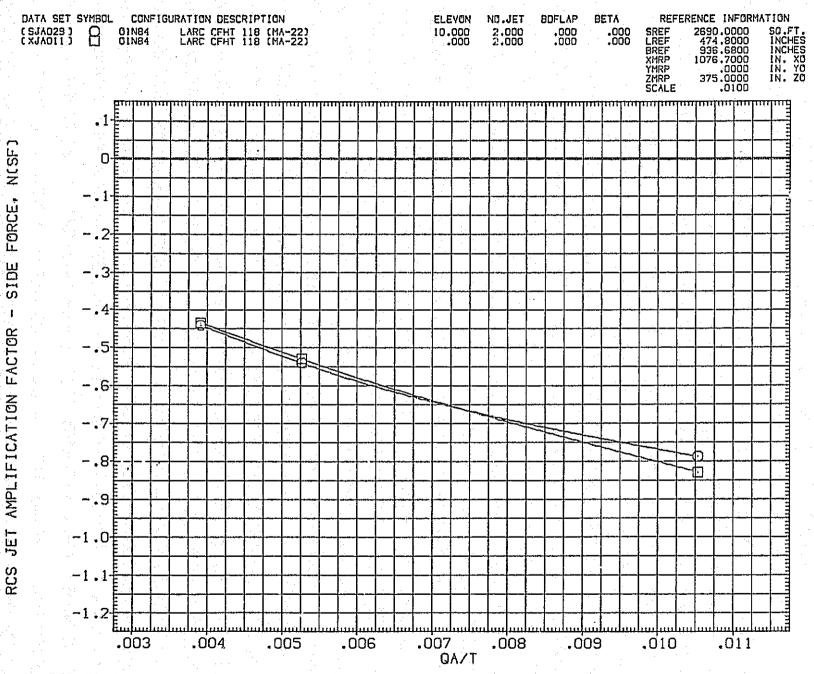
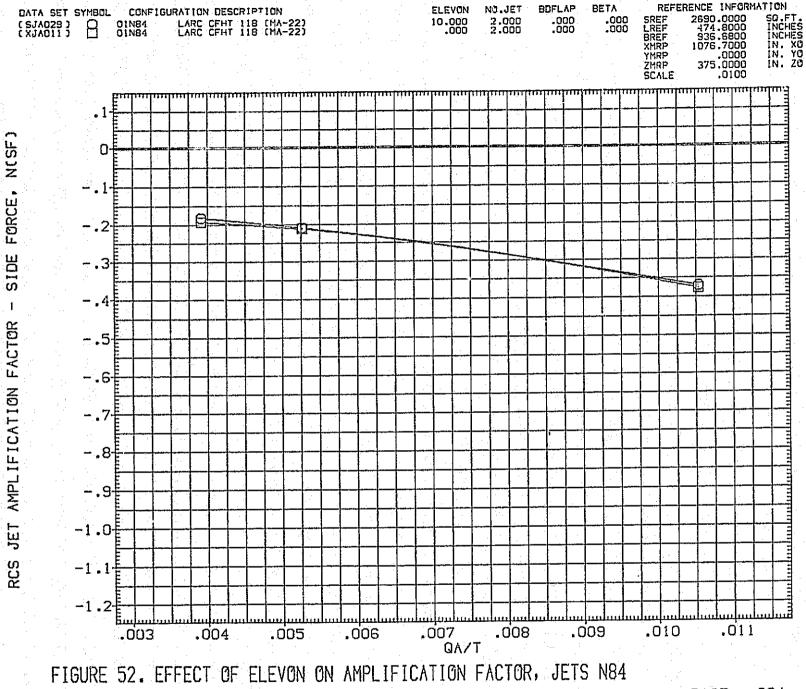


FIGURE 52. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N84
(B)ALPHA = .00



(C)ALPHA = 10.00

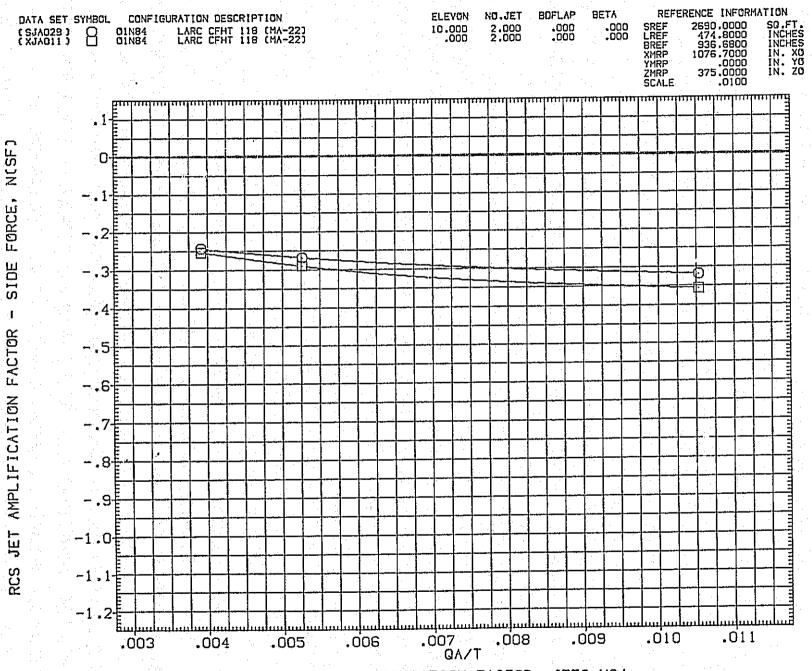


FIGURE 52. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N84

FIGURE 52. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N84
(E)ALPHA = 35.00

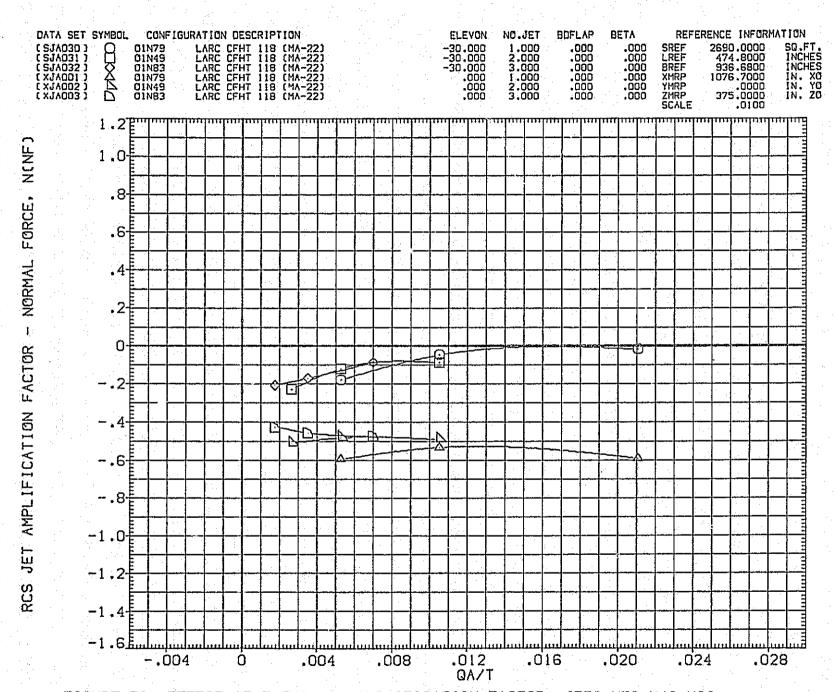


FIGURE 53. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79, N49, N83

(A)ALPHA = -8.00

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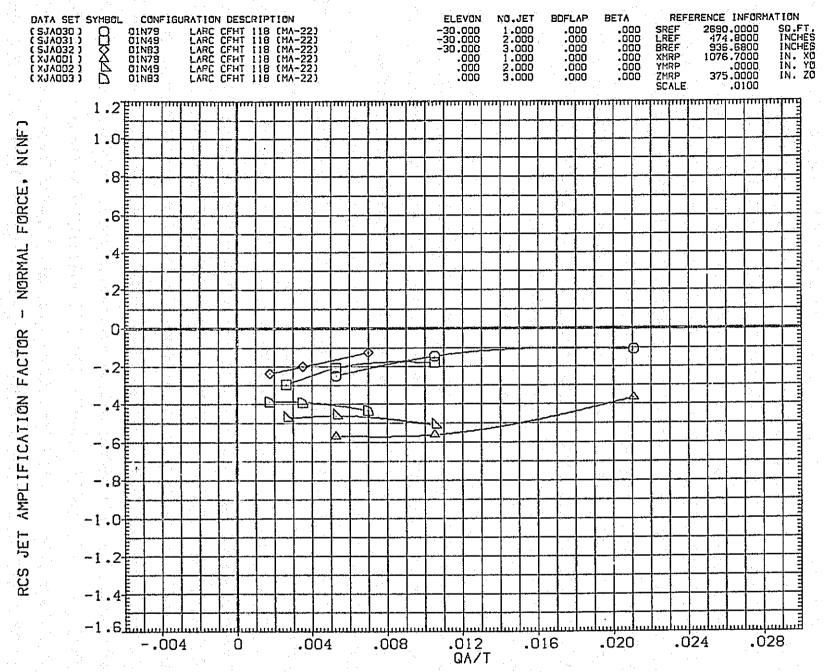


FIGURE 53. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79, N49, N83

(B)ALPHA = .00

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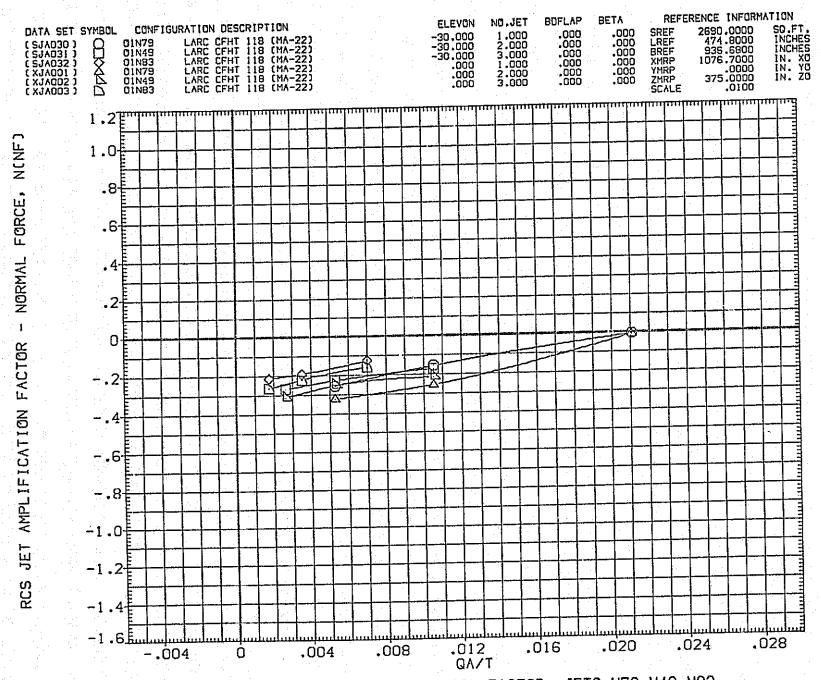


FIGURE 53. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79, N49, N83

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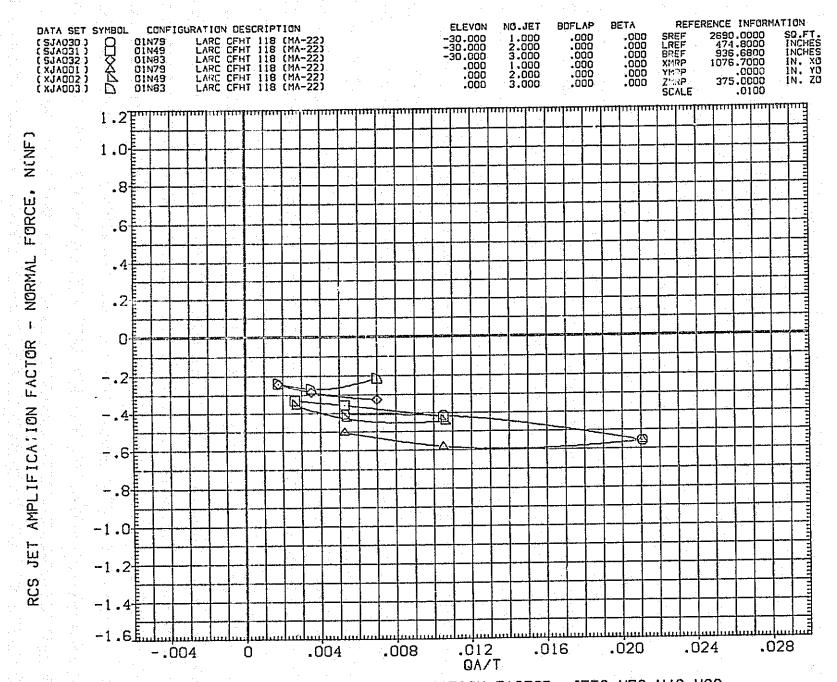


FIGURE 53. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79, N49, N83

CDJALPHA = 20.00

PAGE 990

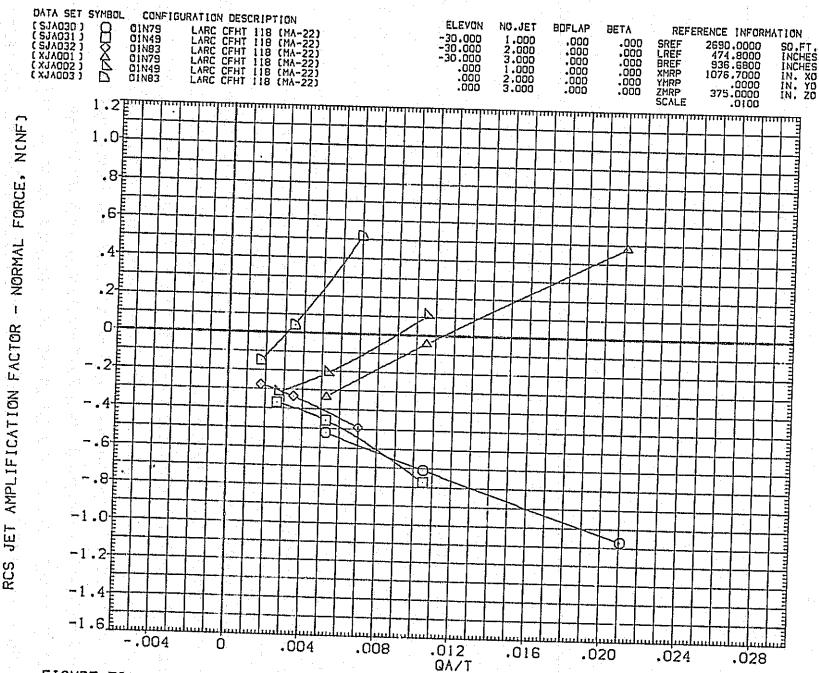


FIGURE 53. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79, N49, N83

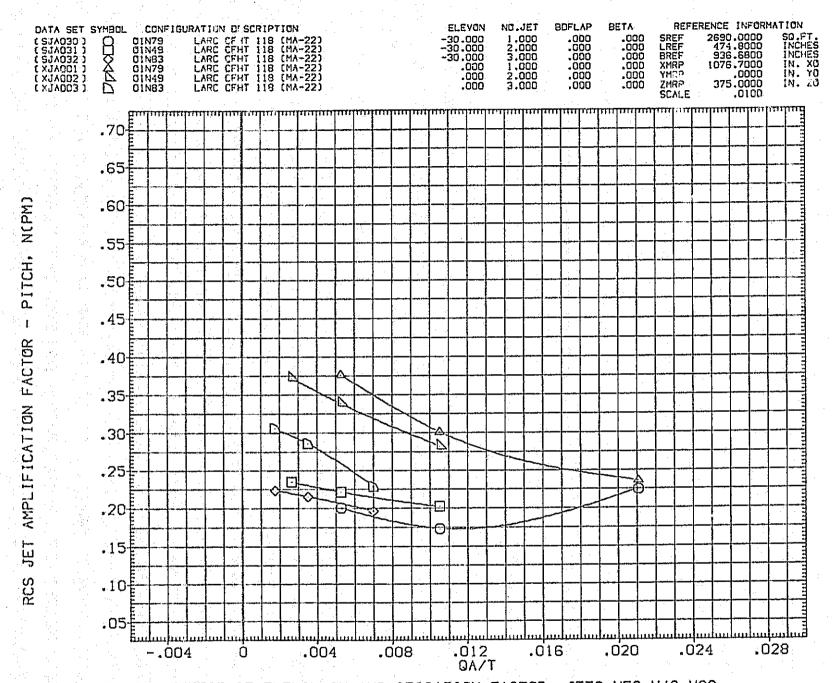


FIGURE 53. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79, N49, N83

[A]ALPHA = -8.00

PAGE 992

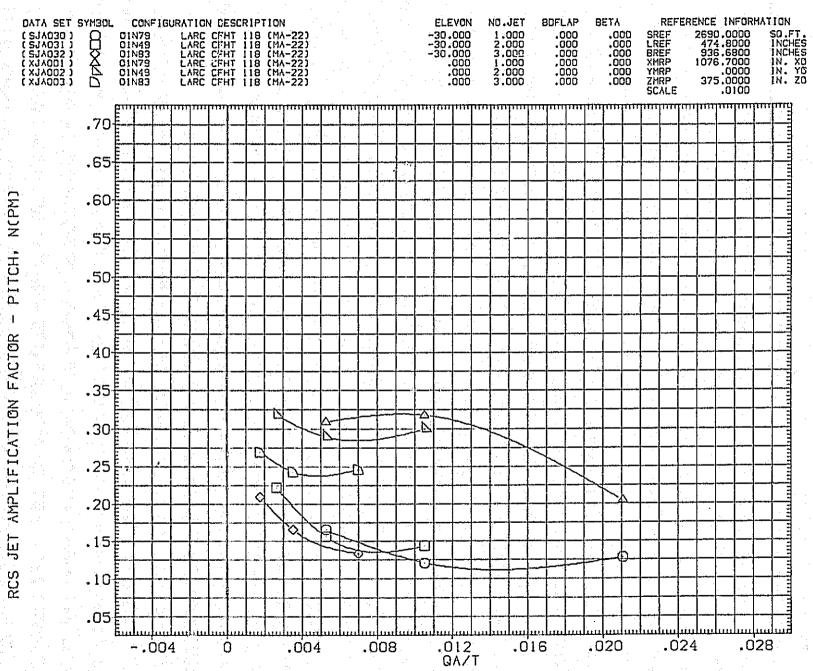


FIGURE 53. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79, N49, N83

(B) ALPHA = .00

PAGE

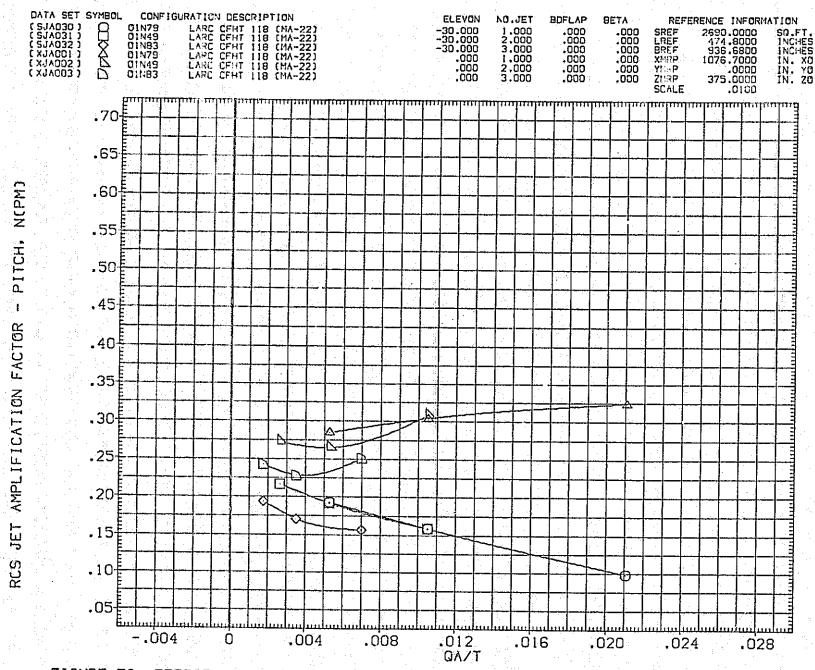


FIGURE 53. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79, N49, N83

(C)ALPHA = 10.00

PAGE 994

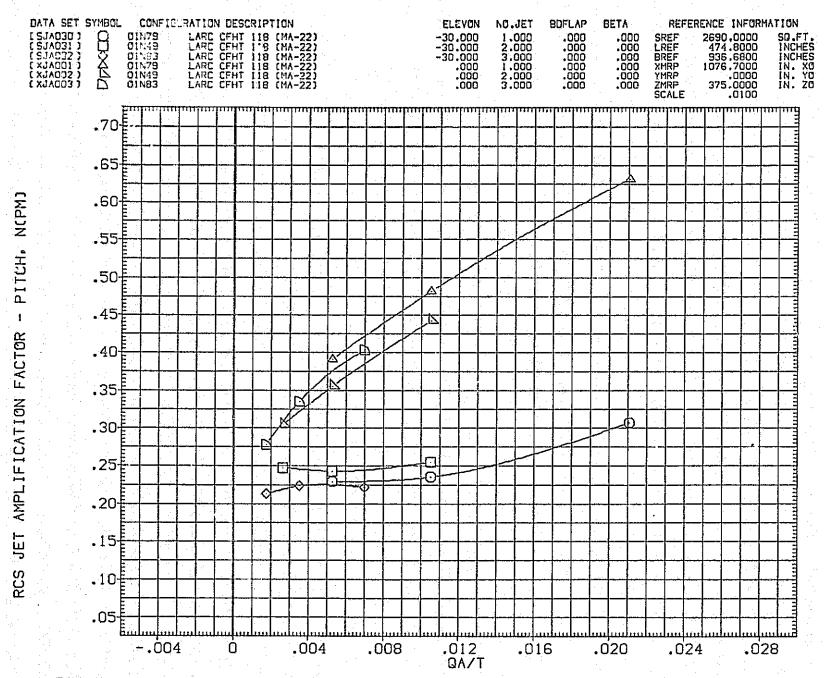


FIGURE 53. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79, N49, N83

(D)ALPHA = 20.00

PAGE 995

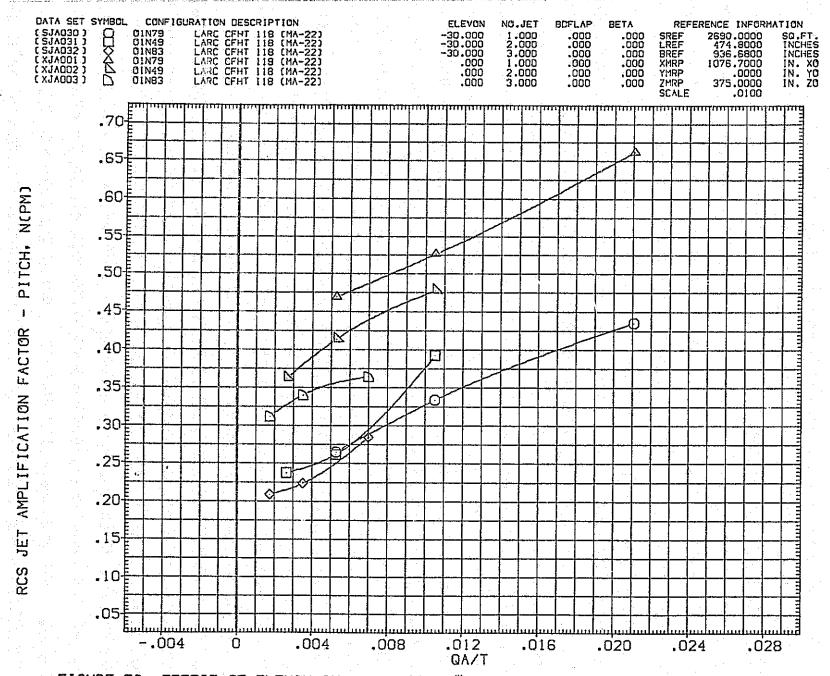


FIGURE 53. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79, N49, N83

(E)ALPHA = 35.00

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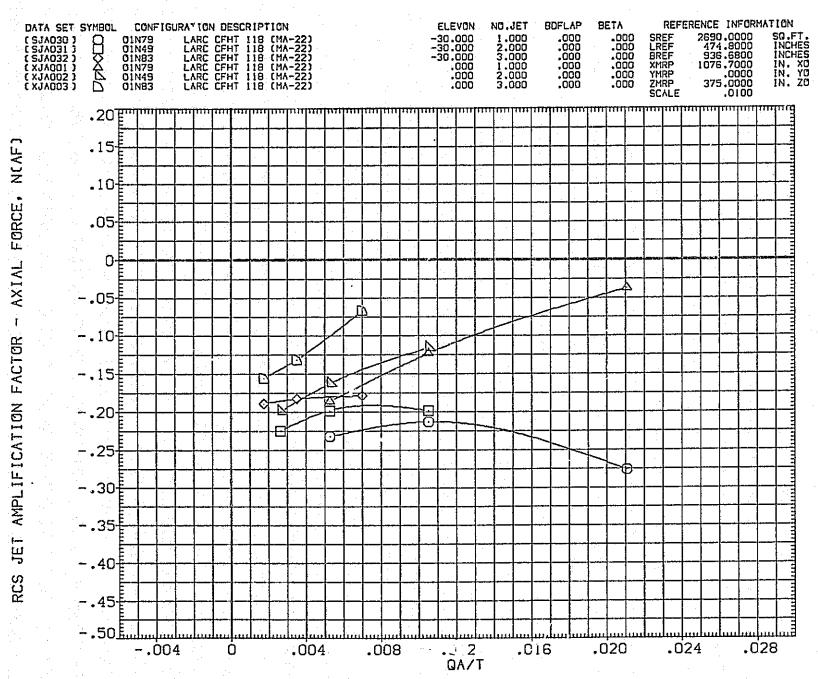


FIGURE 53. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79,N49,N83

(A)ALPHA = -8.00

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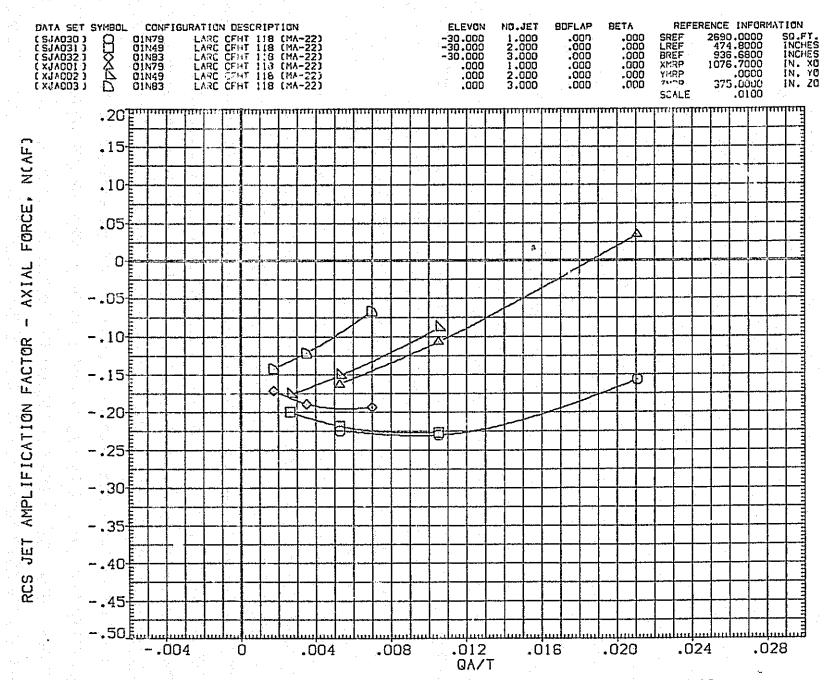


FIGURE 53. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79,N49,N83

(B)ALPHA = .00 PAGE 998

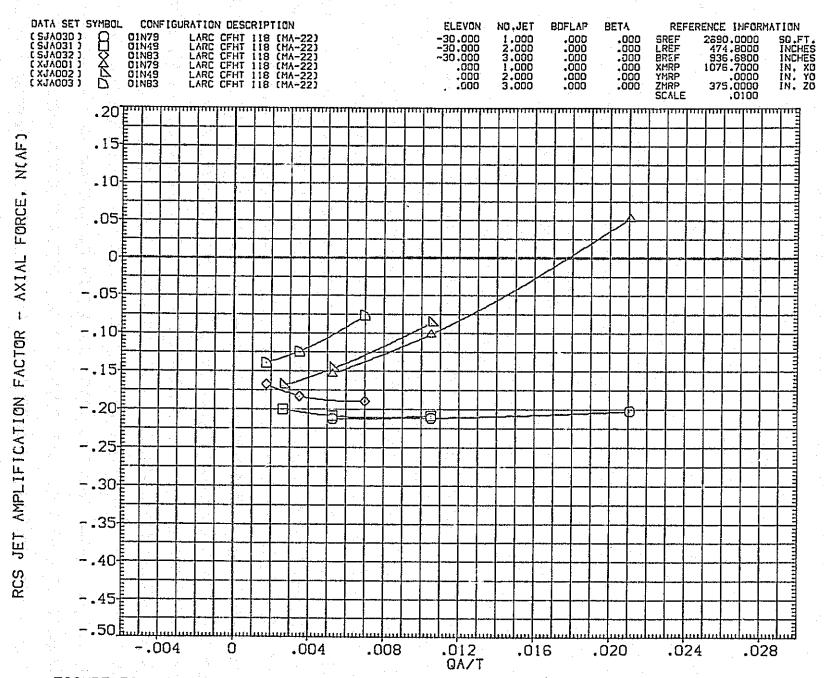


FIGURE 53. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79, N49, N83

(C) ALPHA = 10.00

PAGE

999

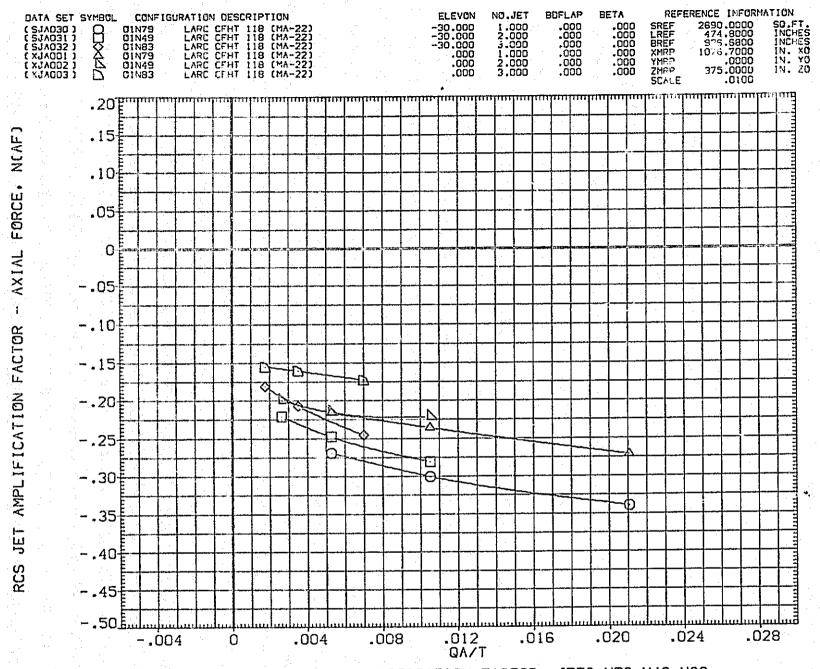


FIGURE 53. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79, N49, N83

CD) ALPHA = 20.00

PAGE 1000

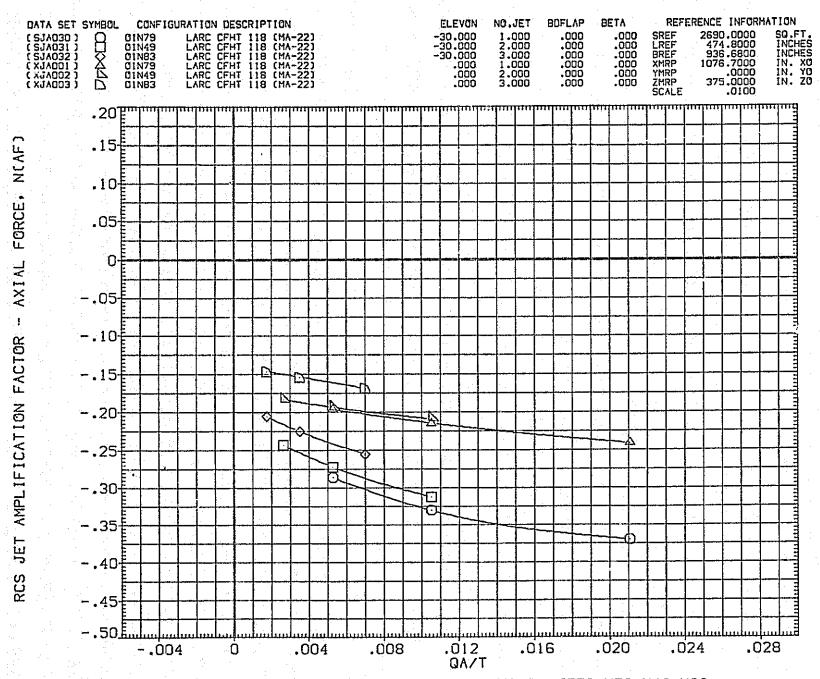


FIGURE 53. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79, N49, N83

(E)ALPHA = 35.00

PAGE 1001

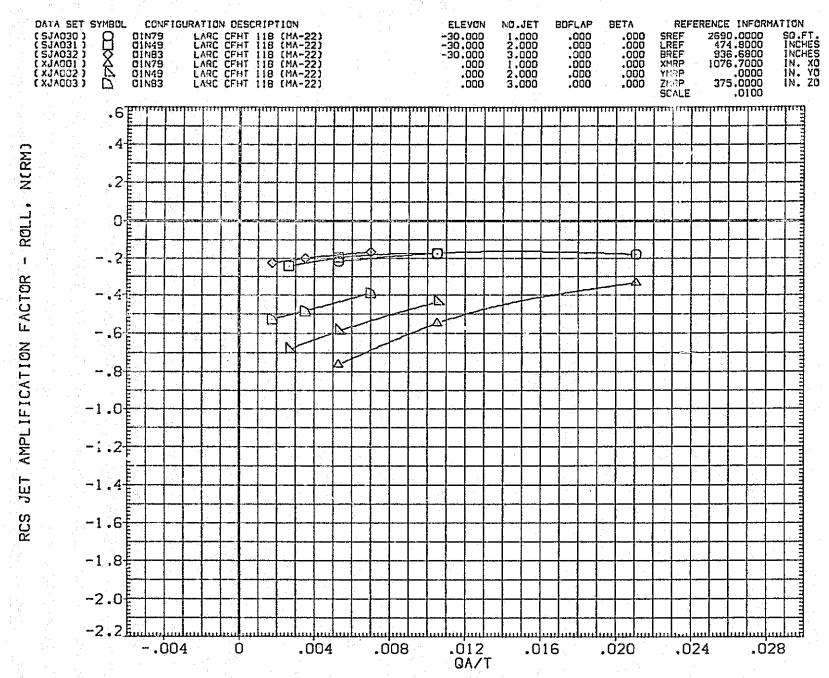


FIGURE 53. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79, N49, N83

(A)ALPHA = -8.00

PAGE 1002

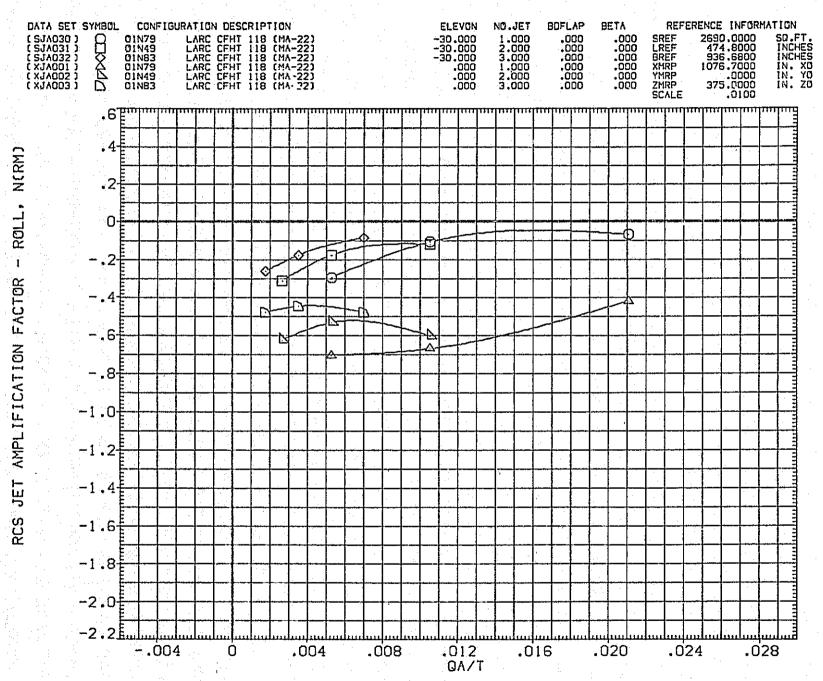


FIGURE 53. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79,N49,N83

(B)ALPHA = .00

PAGE 1003

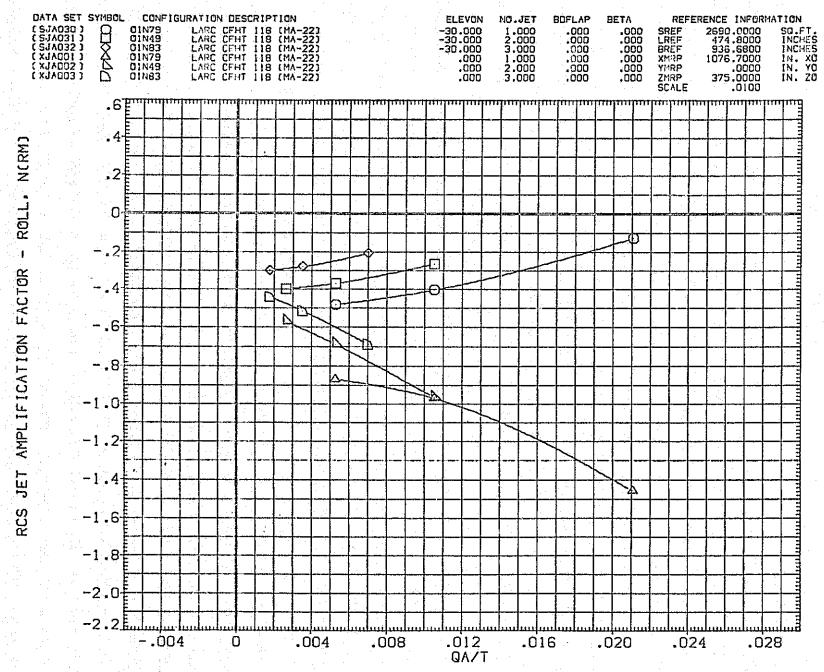


FIGURE 53. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79, N49, N83

(C)ALPHA = 10.00

PAGE 1004



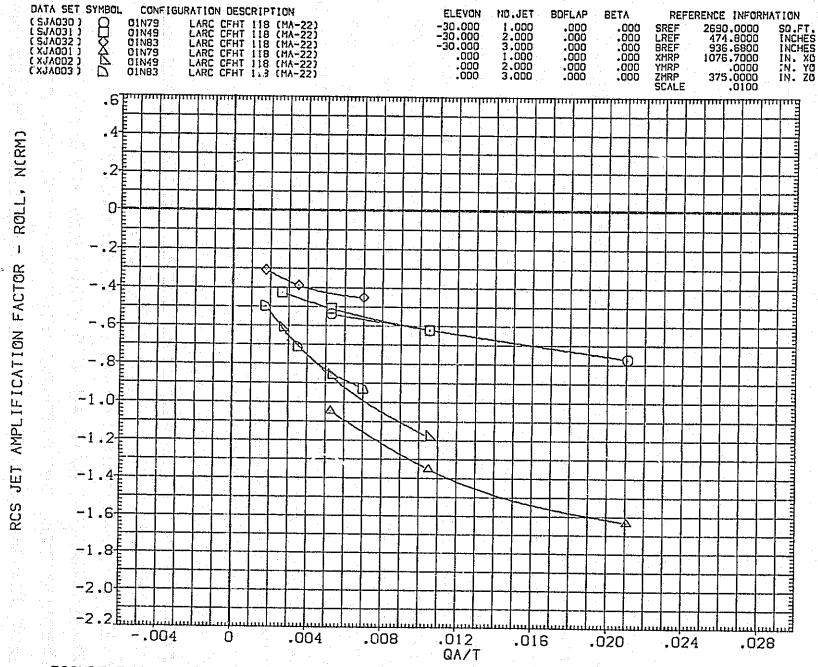


FIGURE 53. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79, N49, N83

CD)ALPHA = 20.00

PAGE 1005

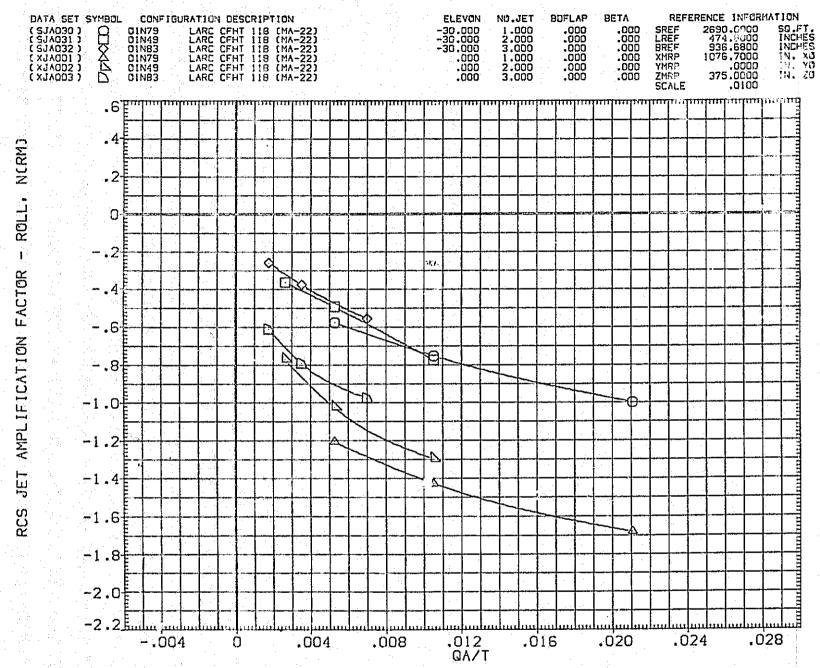


FIGURE 53. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79,N49,N83

(E)ALPHA = 35.00

PAGE 1006

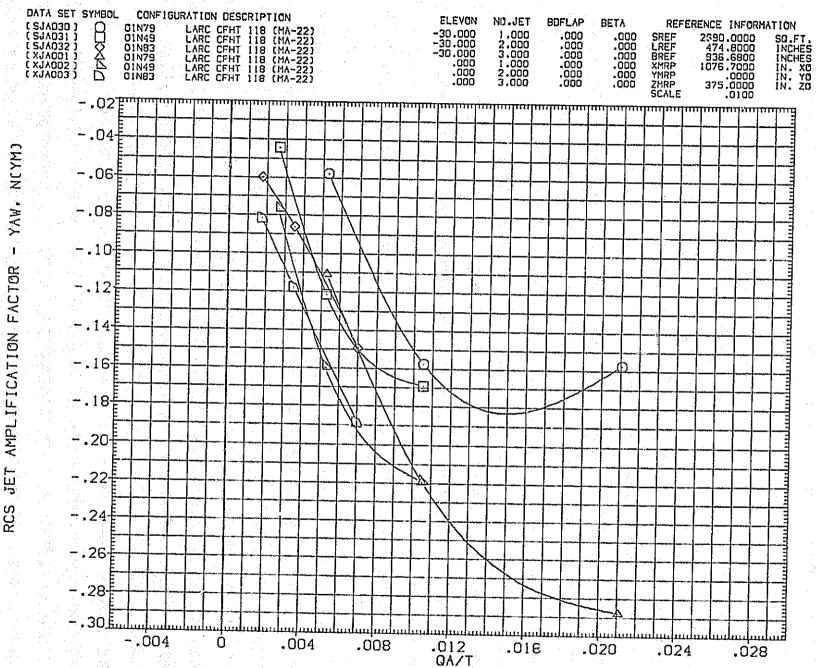


FIGURE 53. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79, N49, N83

(A) ALPHA = -8.00

PAGE

1007

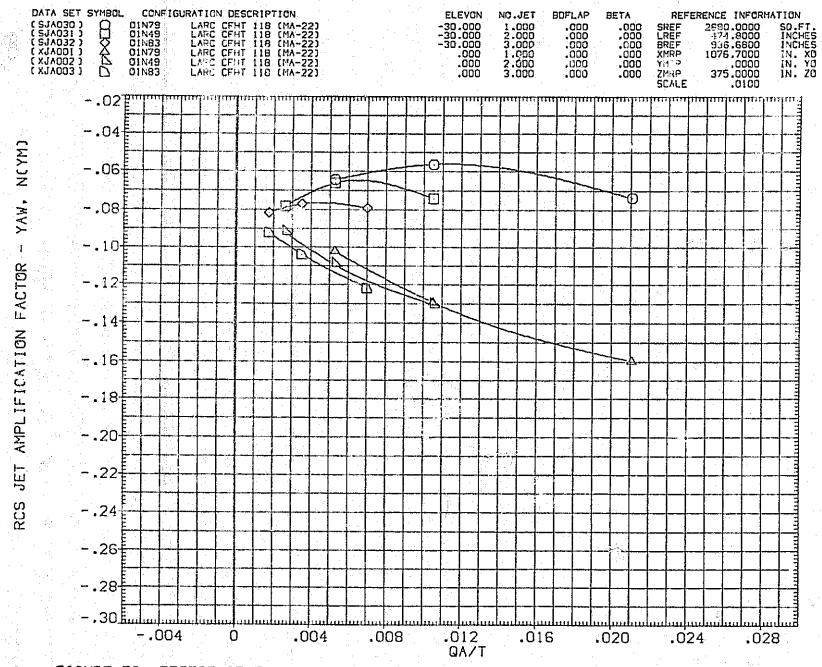


FIGURE 53. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79,N49,N83

(B)ALPHA = .00

PAGE 1008

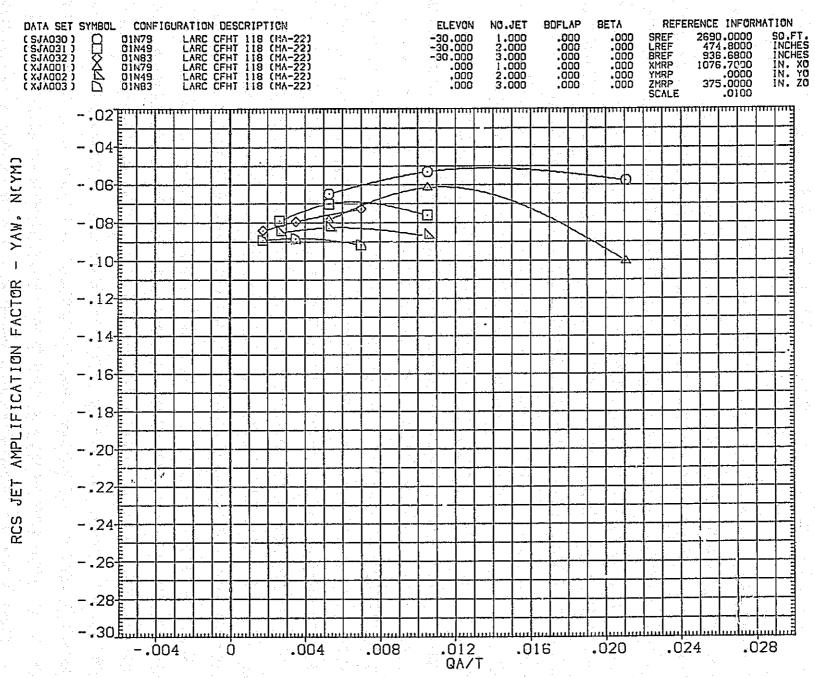


FIGURE 53. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79,N49,N83

(C)ALPHA = 10.00

PAGE 1009

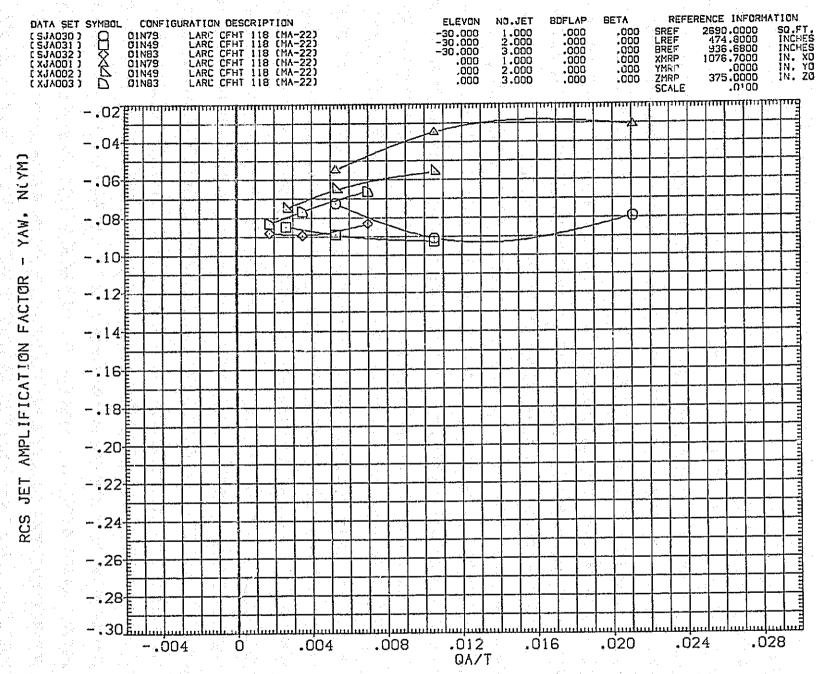


FIGURE 53, EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79, N49, N83

CD) ALPHA = 20.00

PAGE 1010

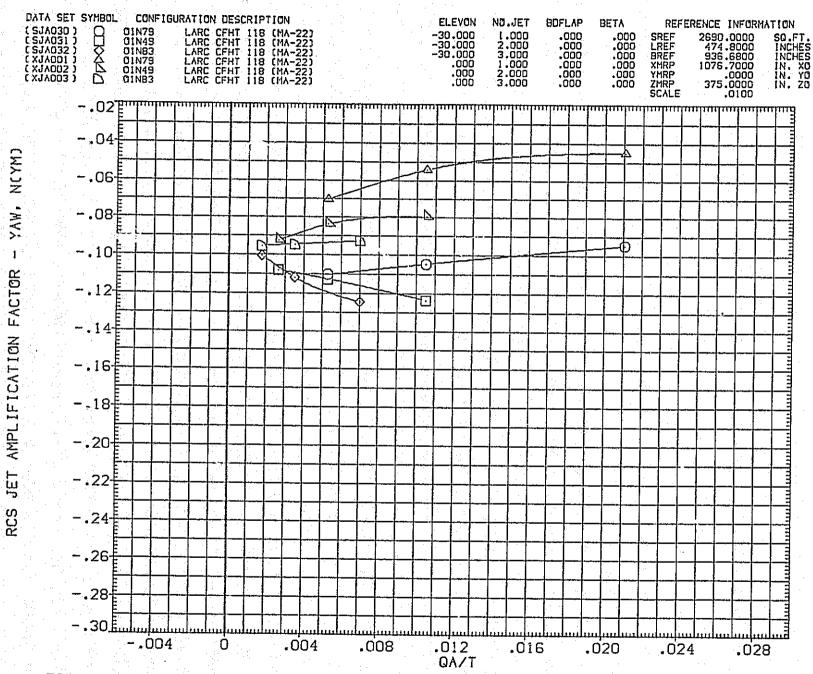


FIGURE 53. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79, N49, N83

(E)ALPHA = 35.00

PAGE 1011

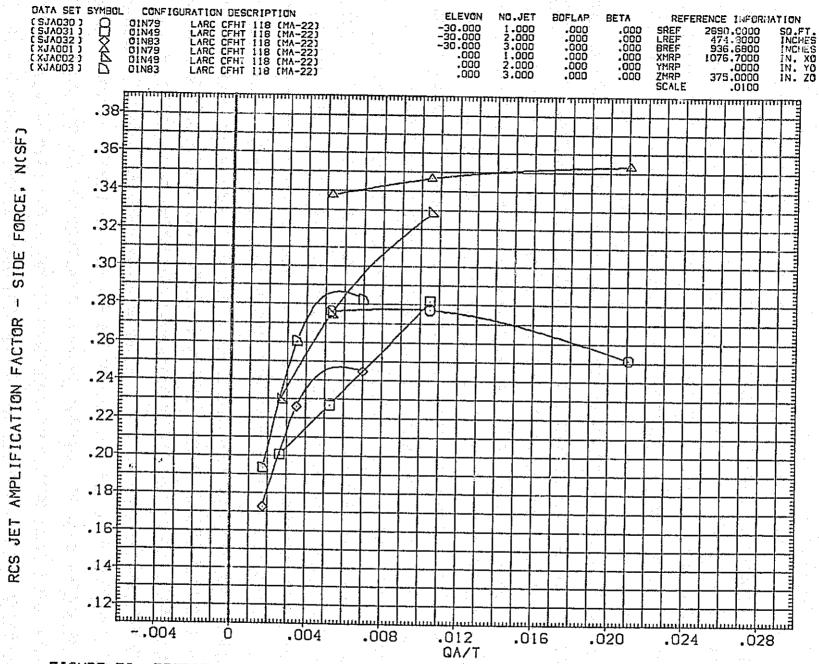


FIGURE 53. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79, N49, N83

(A)ALPHA = -8.00

PAGE 1012

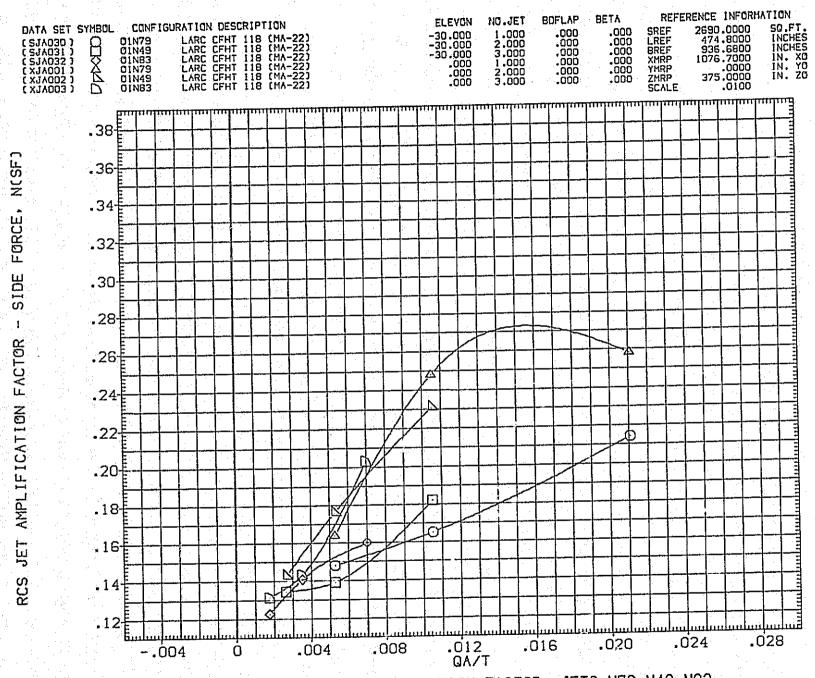


FIGURE 53. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79, N49, N83

PAGE 1013

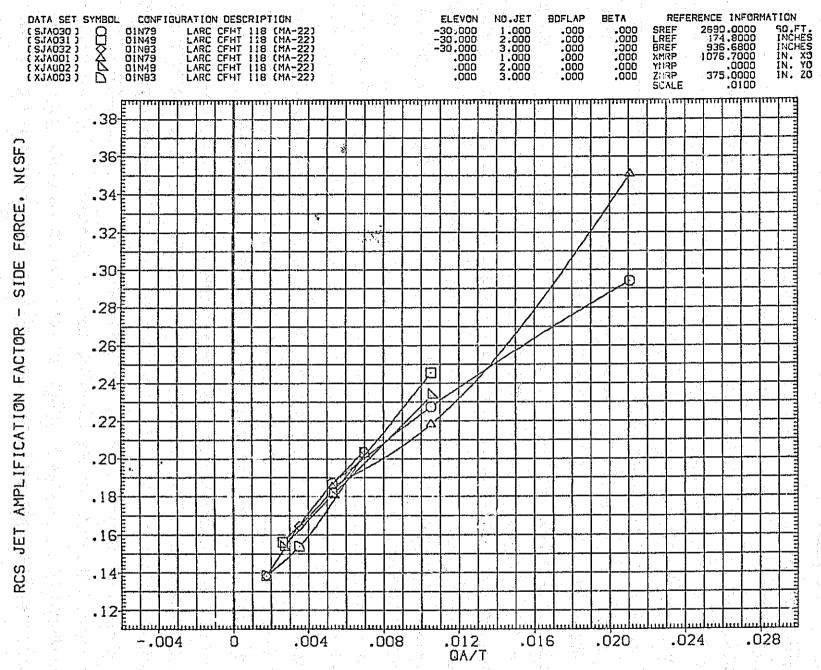


FIGURE 53. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79, N49, N83

(C) ALPHA = 10.00

PAGE 1014

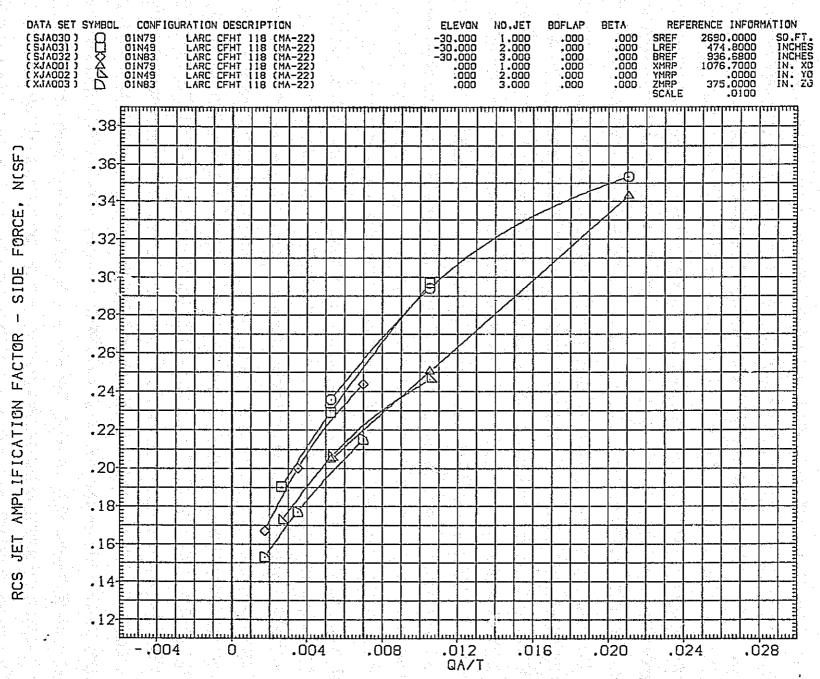


FIGURE 53. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79, N49, N83

(D)ALPHA = 20.00

PAGE 1015

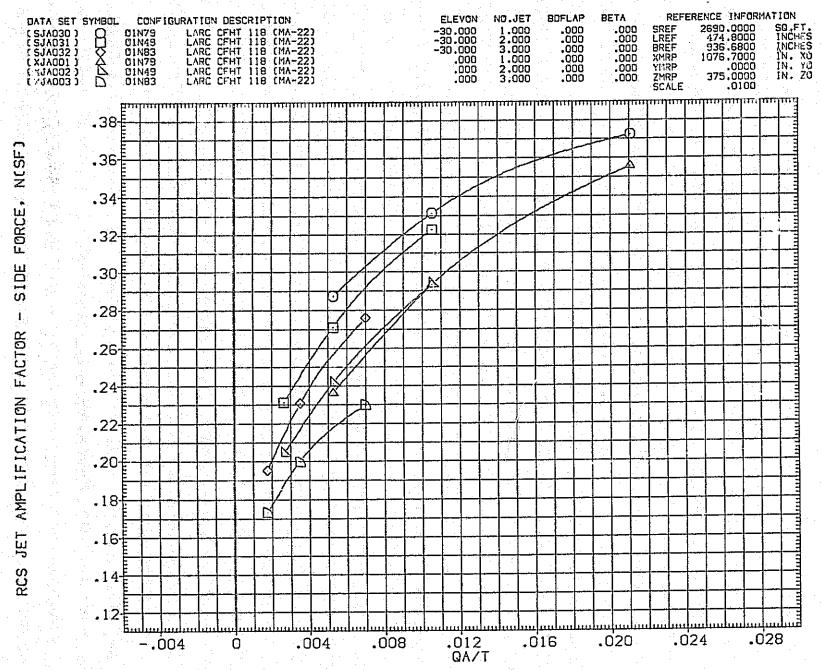


FIGURE 53. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79, N49, N83

CEDALPHA = 35.00

PAGE 1016

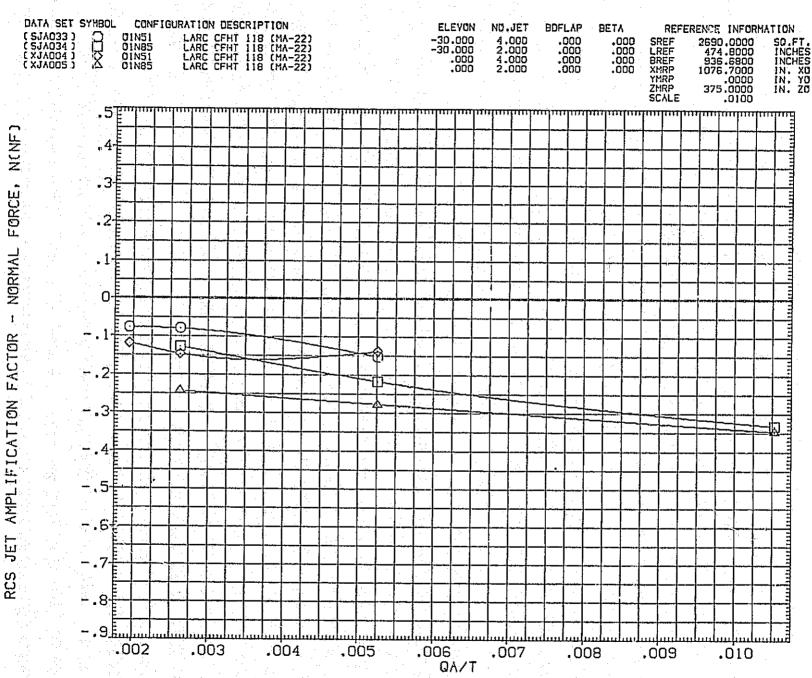


FIGURE 54. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N51, N85
(A)ALPHA = -8.00

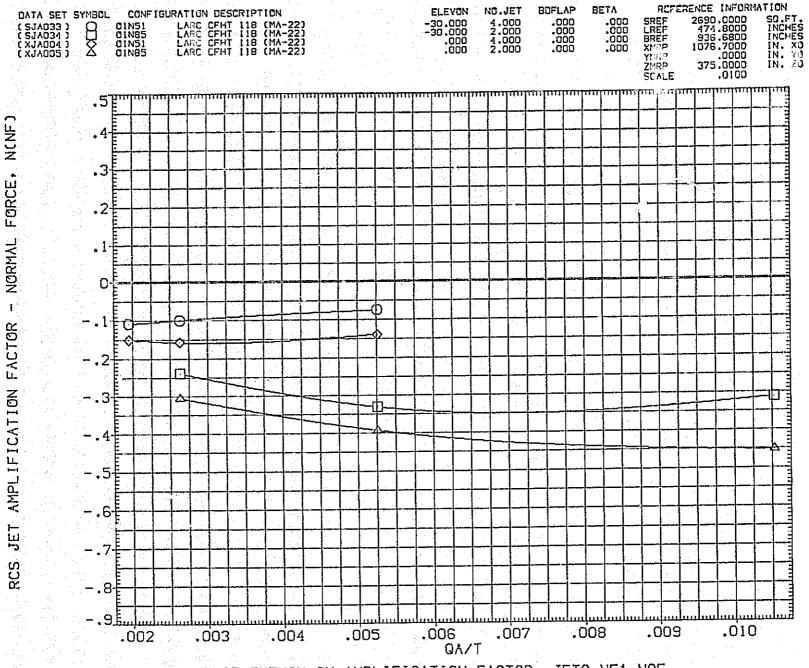


FIGURE 54. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N51, N85

(B) ALPHA = .00

PAGE 1018

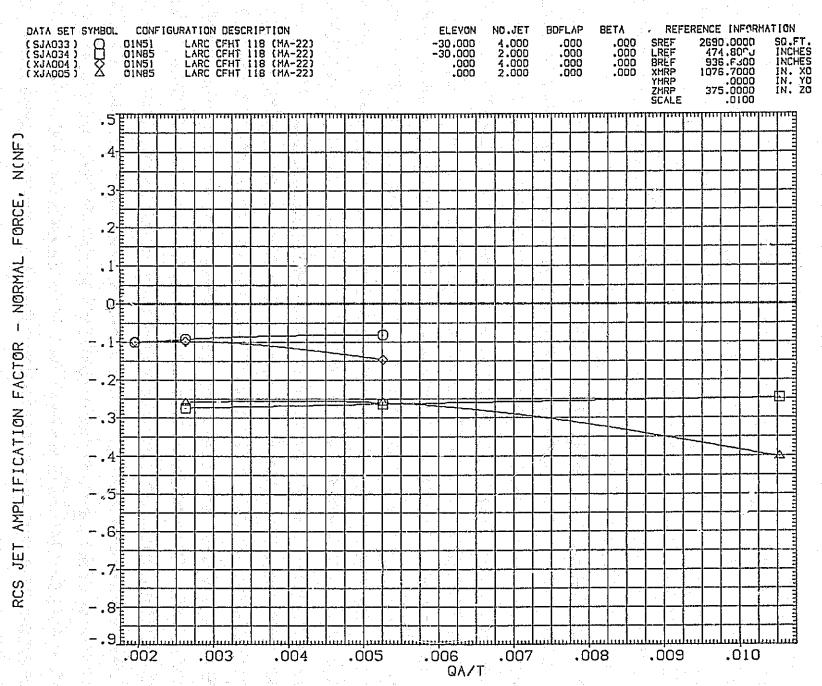


FIGURE 54. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N51,N85

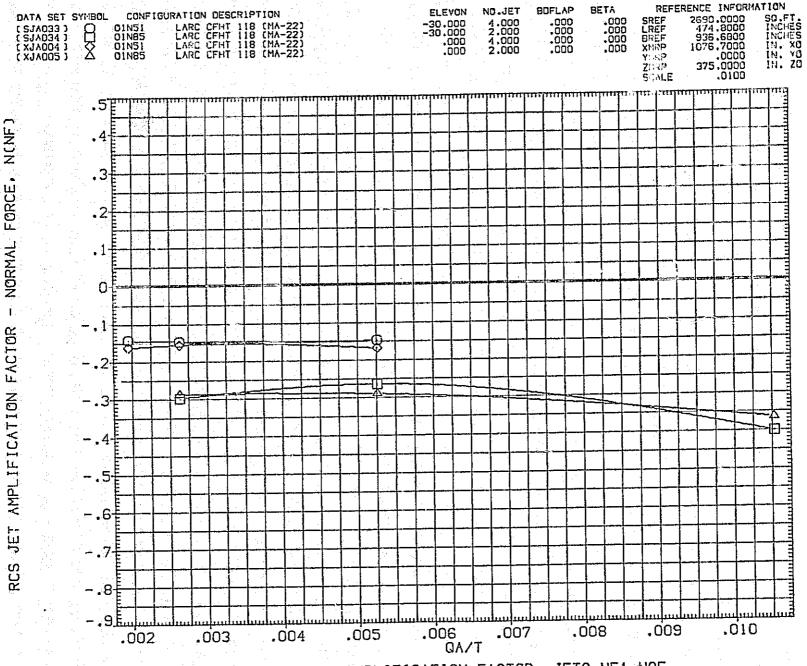


FIGURE 54. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N51,N85

(D)ALPHA = 20 00

PAGE 1020

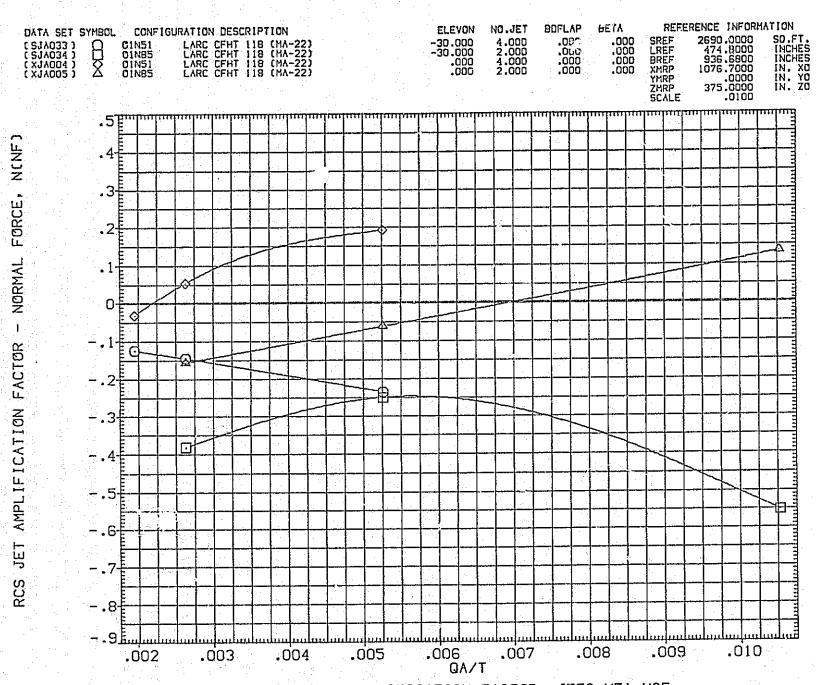


FIGURE 54. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N51, N85

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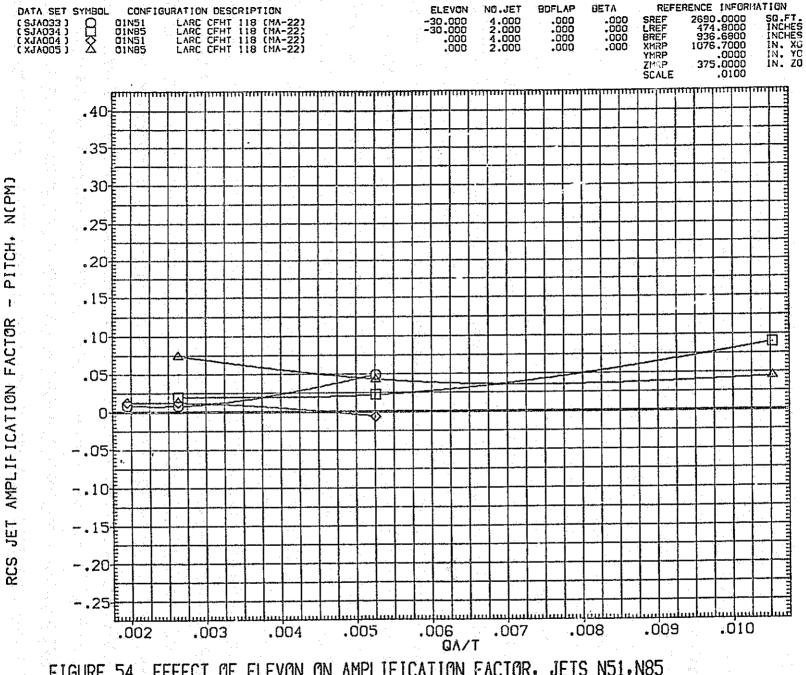


FIGURE 54. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N51,N85

(A)ALPHA = -8.00

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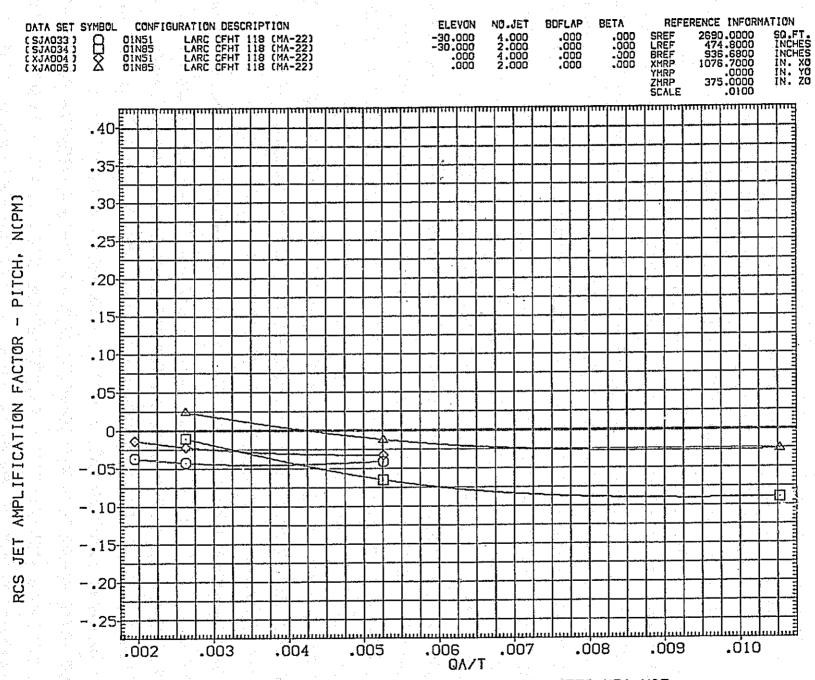


FIGURE 54. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N51, N85
(B) ALPHA = .00

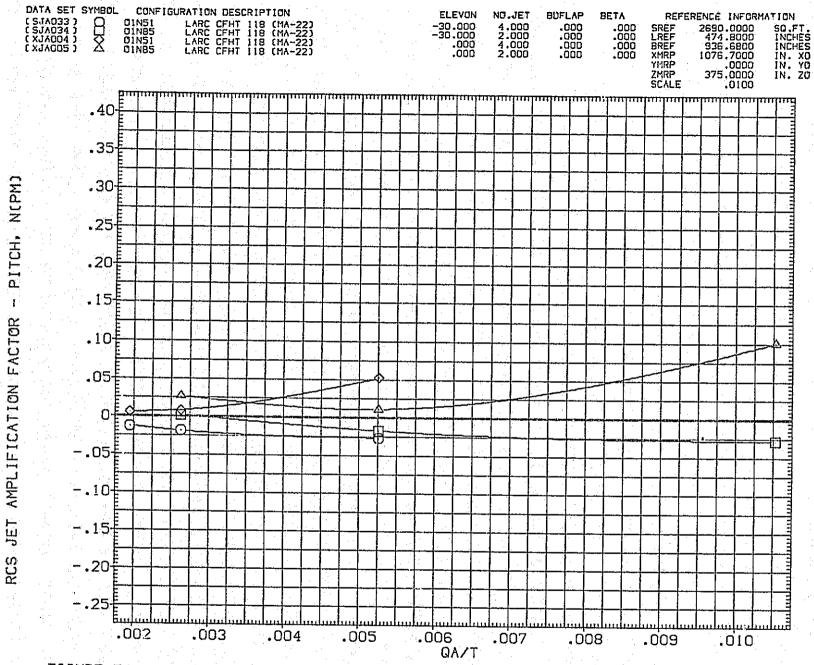


FIGURE 54. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N51, N85

CC)ALPHA = 10.00

PAGE

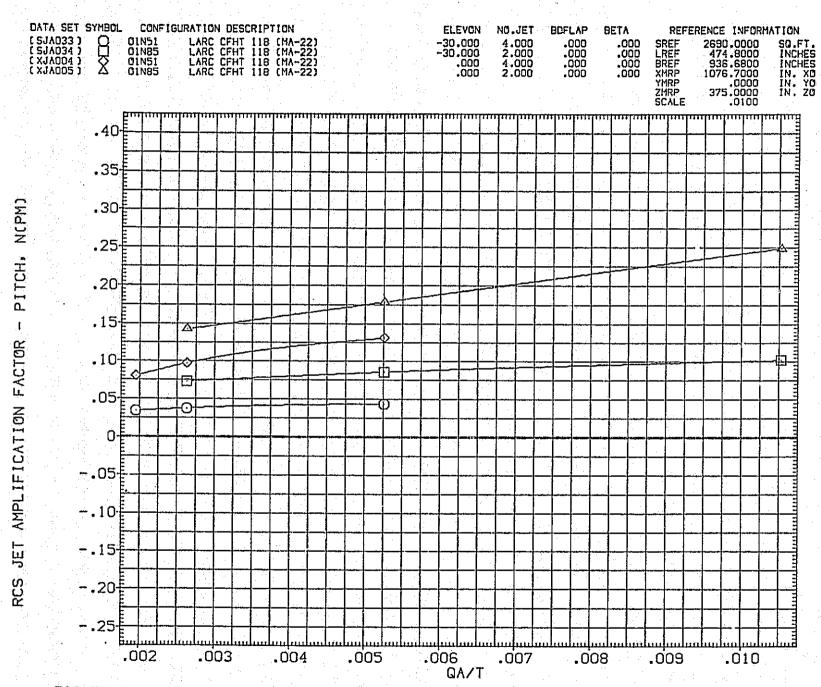


FIGURE 54. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N51,N85 CD)ALPHA = 20.00

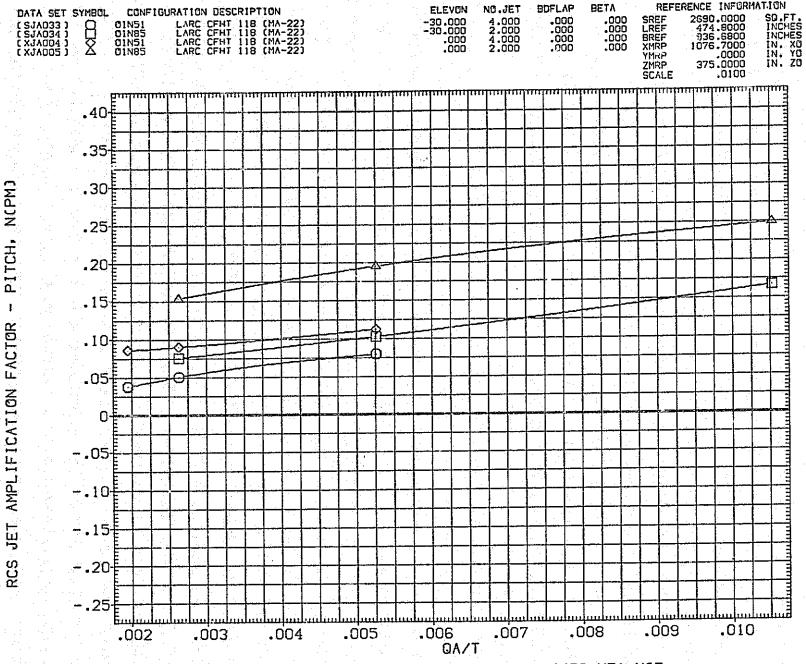


FIGURE 54. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N51, N85

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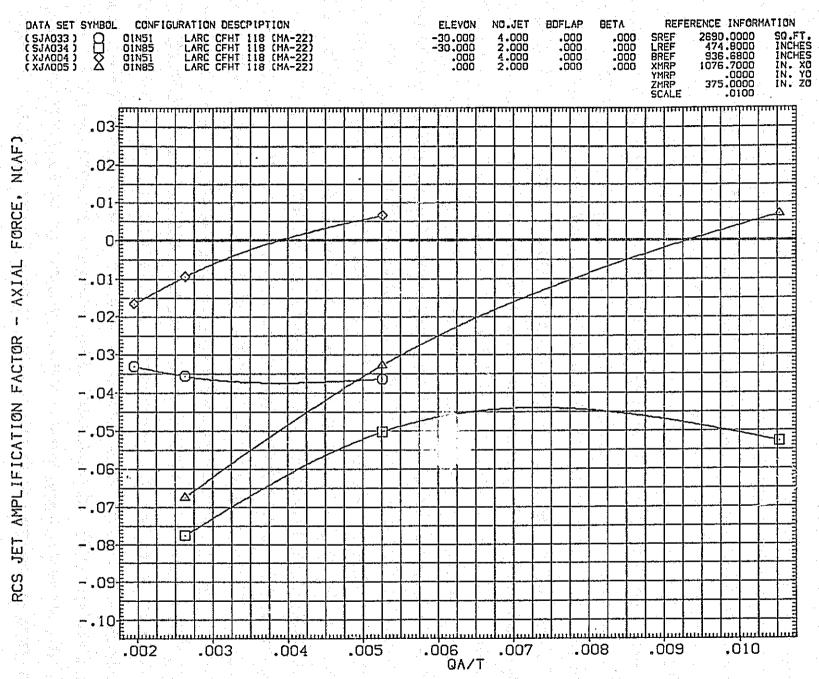


FIGURE 54. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N51,N85

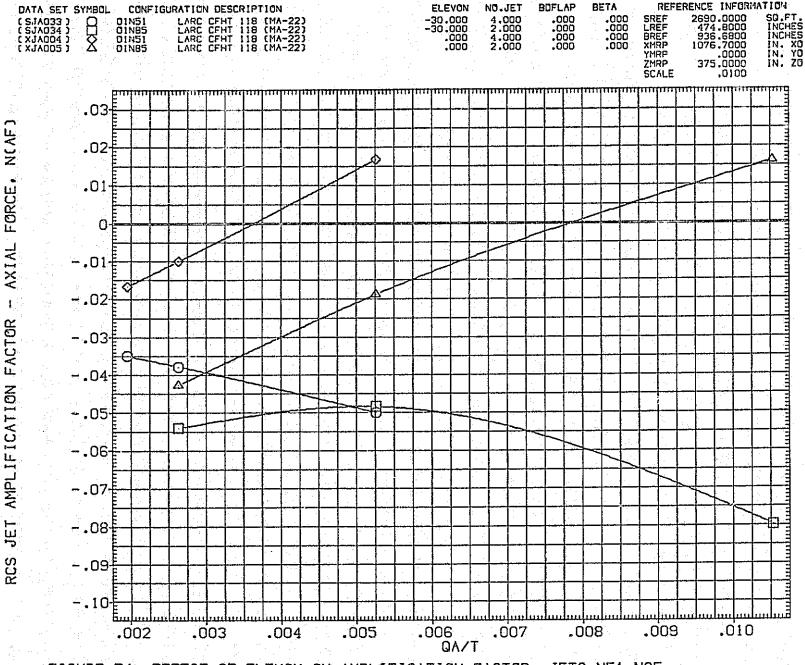


FIGURE 54. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N51,N85

(B)ALPHA = .00

PAGE

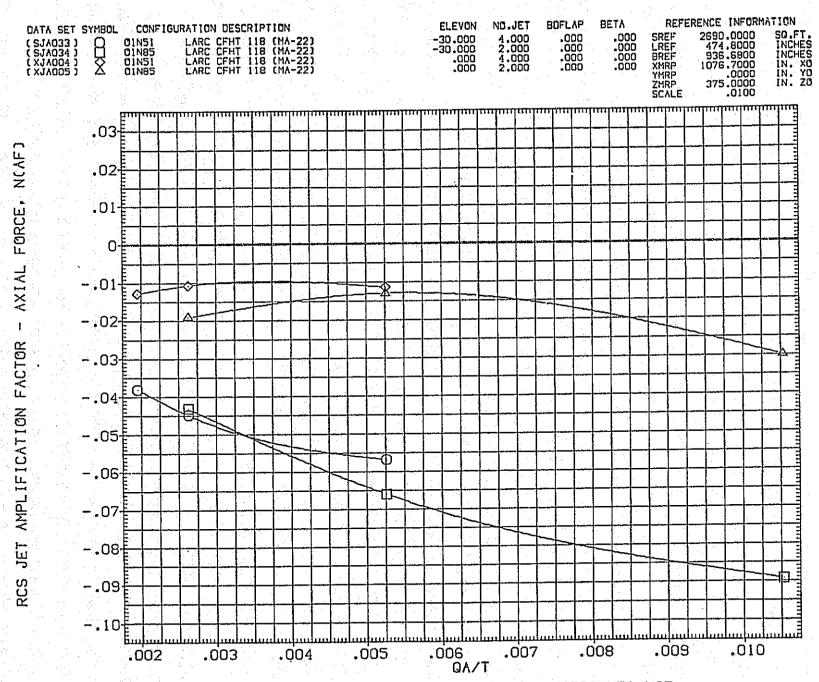


FIGURE 54. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N51, N85

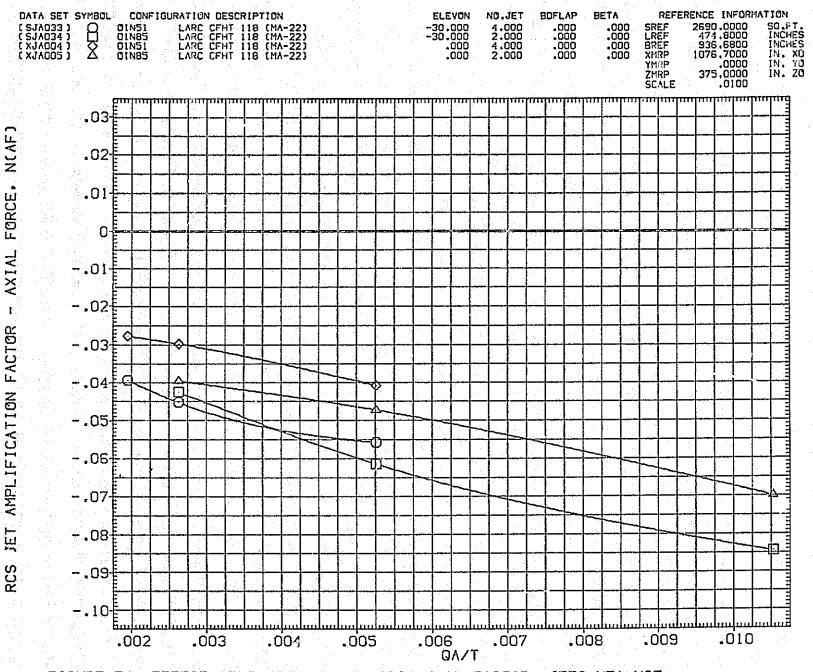


FIGURE 54. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N51,N85

(D)ALPHA = 20.00

PAGE

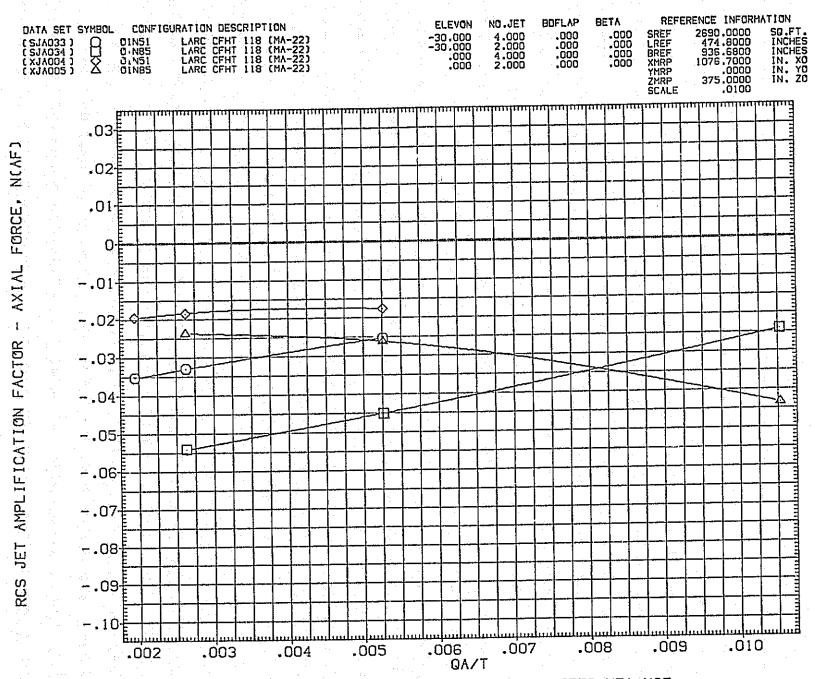


FIGURE 54. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N51, N85

(E)ALPHA = 35.00

PAGE

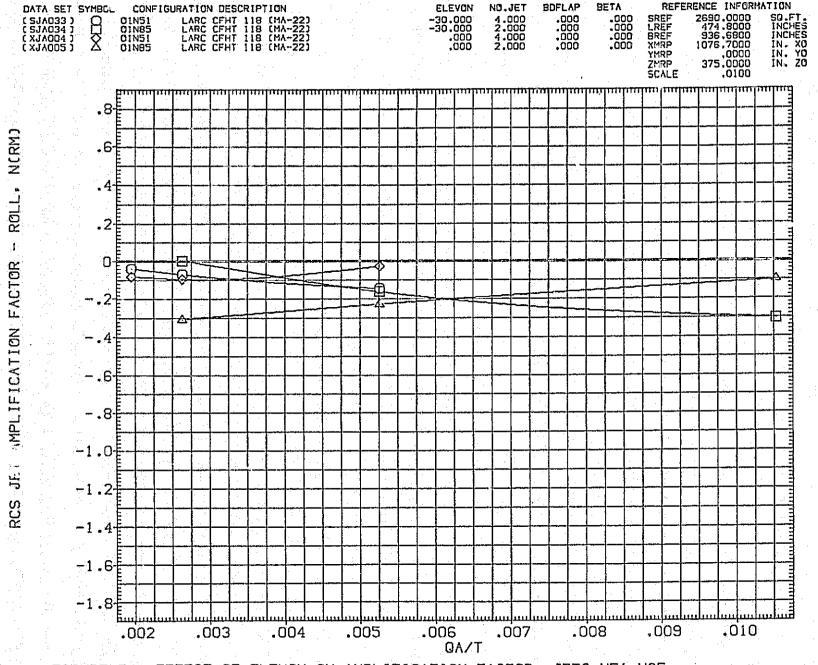


FIGURE 54. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N51,N85

(A)ALPHA = -8.00

PAGE 1032

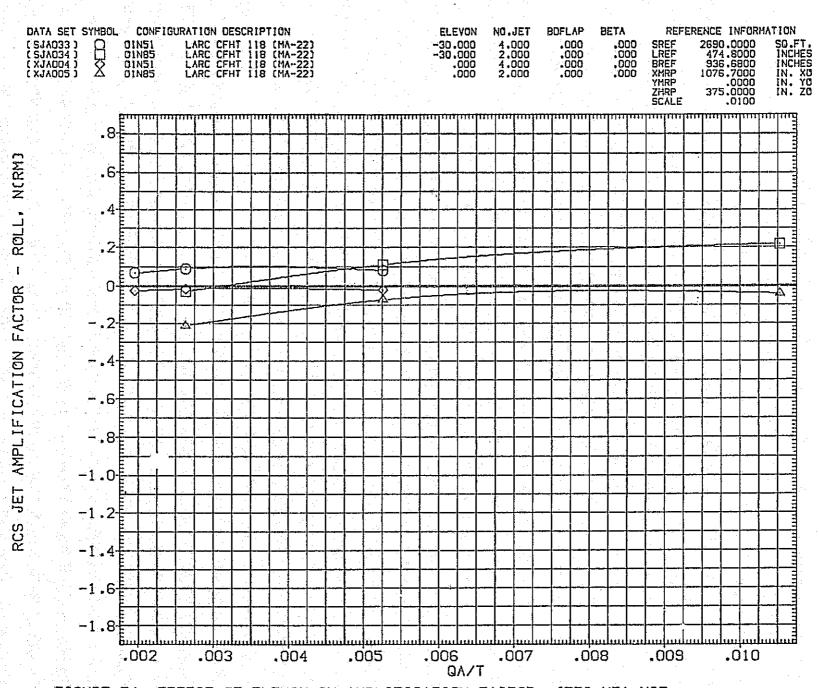


FIGURE 54. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N51,N85

(B)ALPHA = .00

PAGE 1033

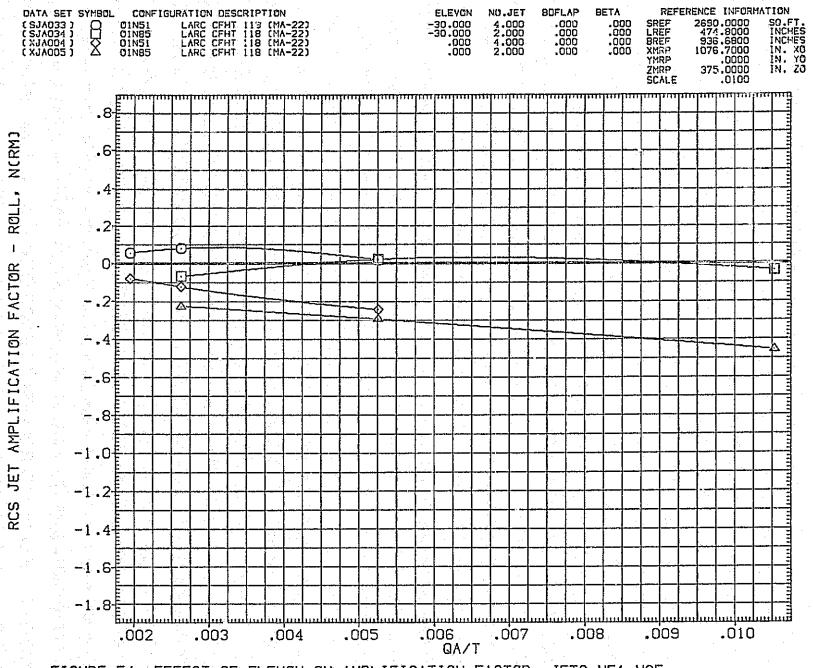


FIGURE 54. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N51,N85

COALPHA = 10.00

PAGE 1034

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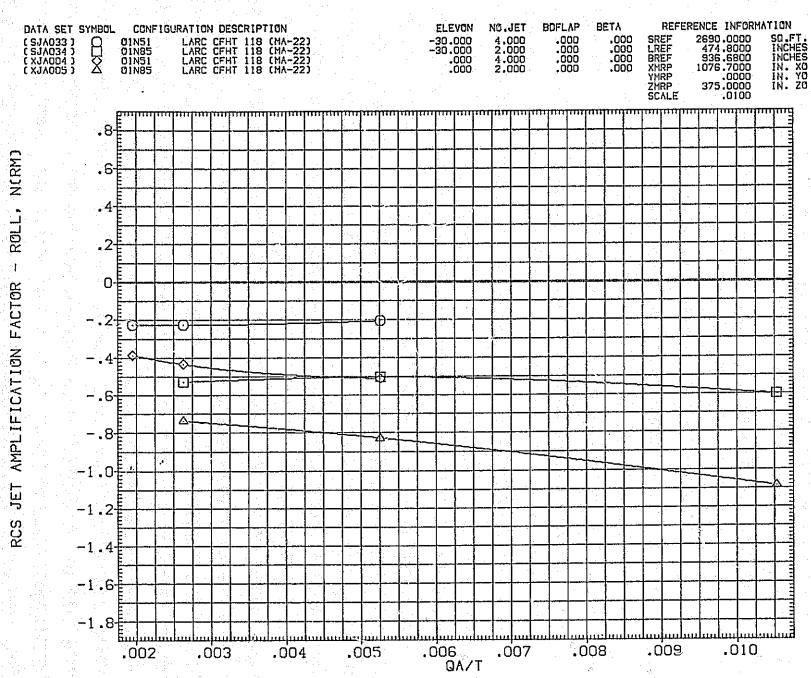


FIGURE 54. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N51, N85

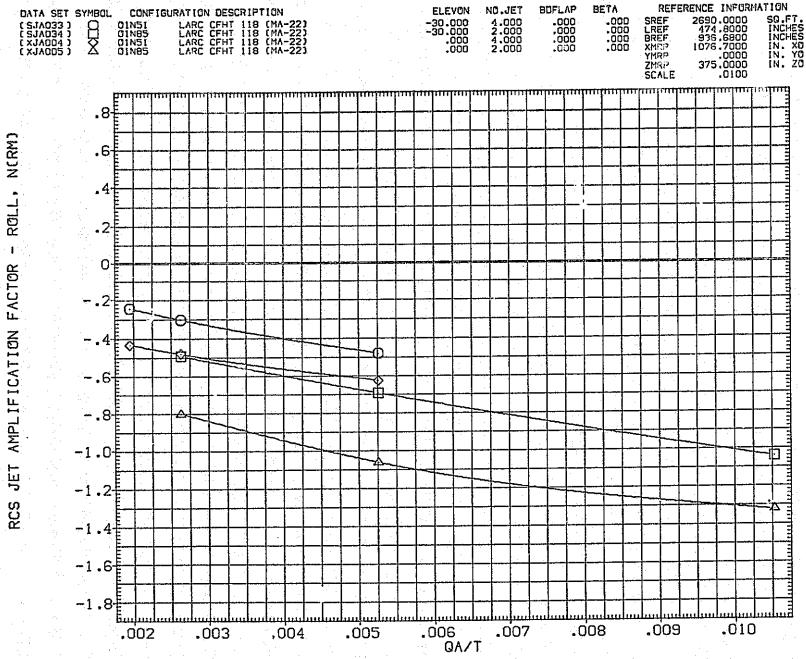


FIGURE 54. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N51, N85

(E) ALPHA = 35.00

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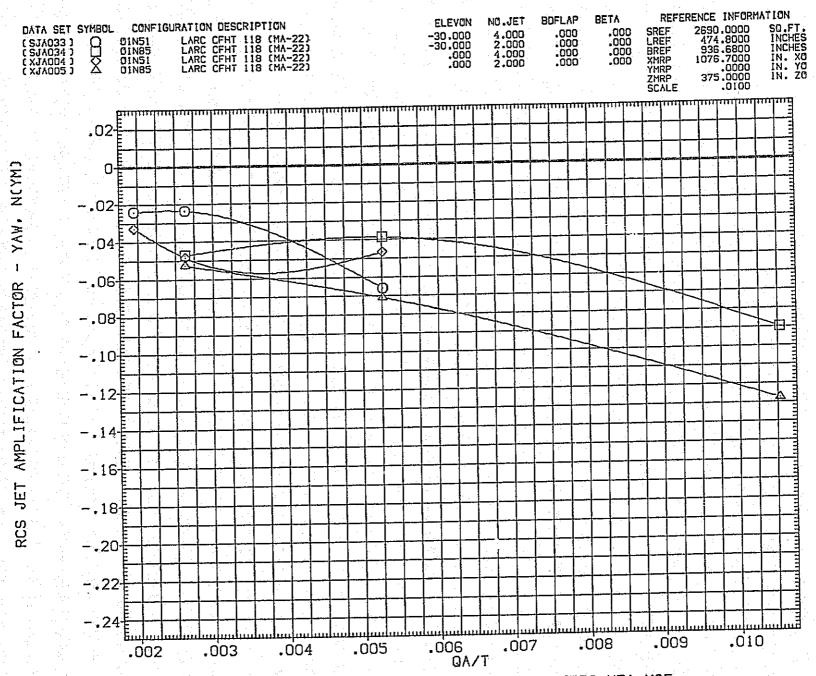


FIGURE 54. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N51, N85

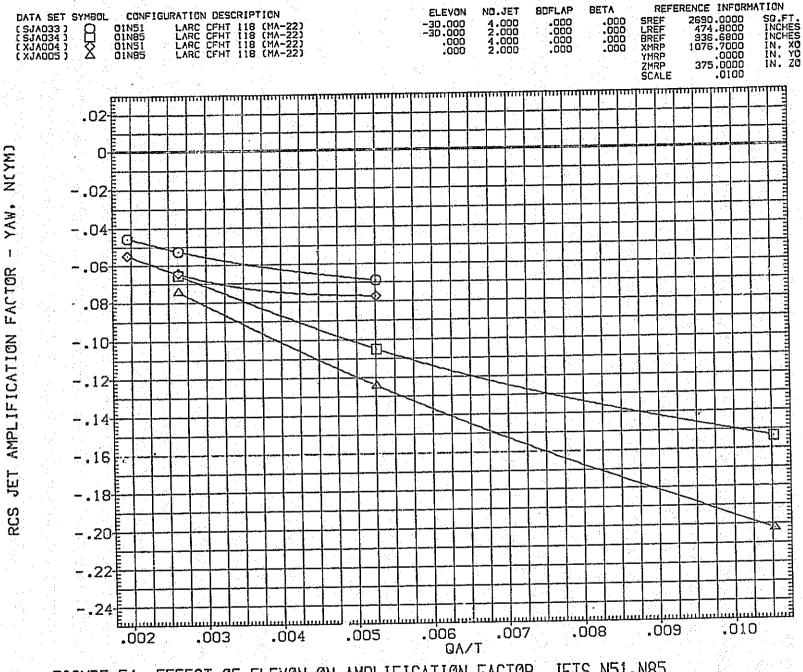


FIGURE 54. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N51,N85

CB)ALPHA = .00

PAGE 1038

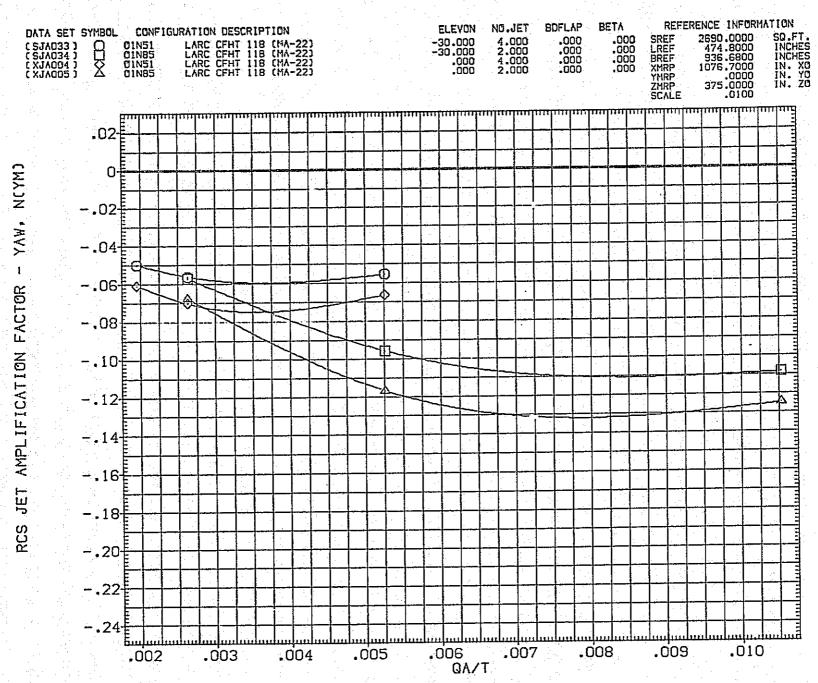
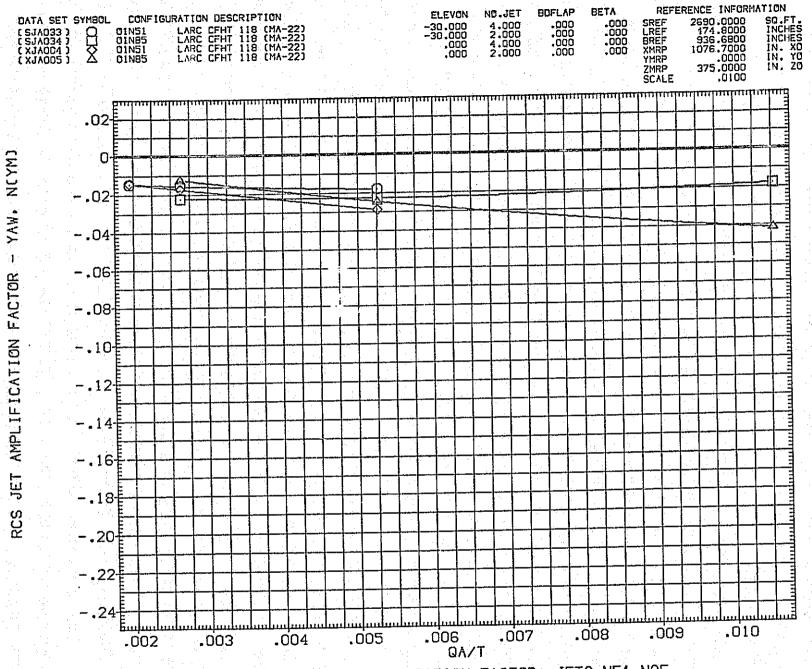


FIGURE 54. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N51, N85



CODALPHA = 20.00

PAGE 1040

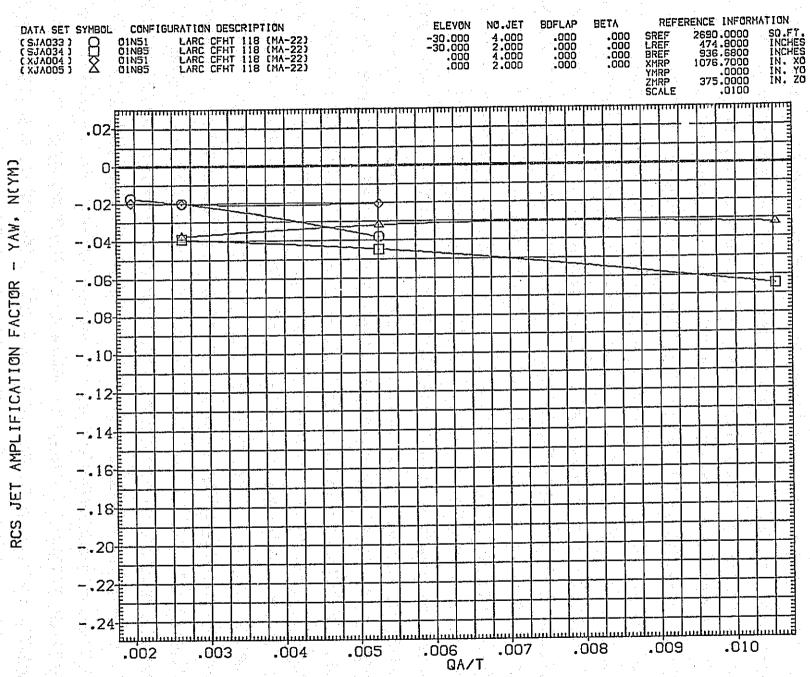


FIGURE 54. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N51, N85

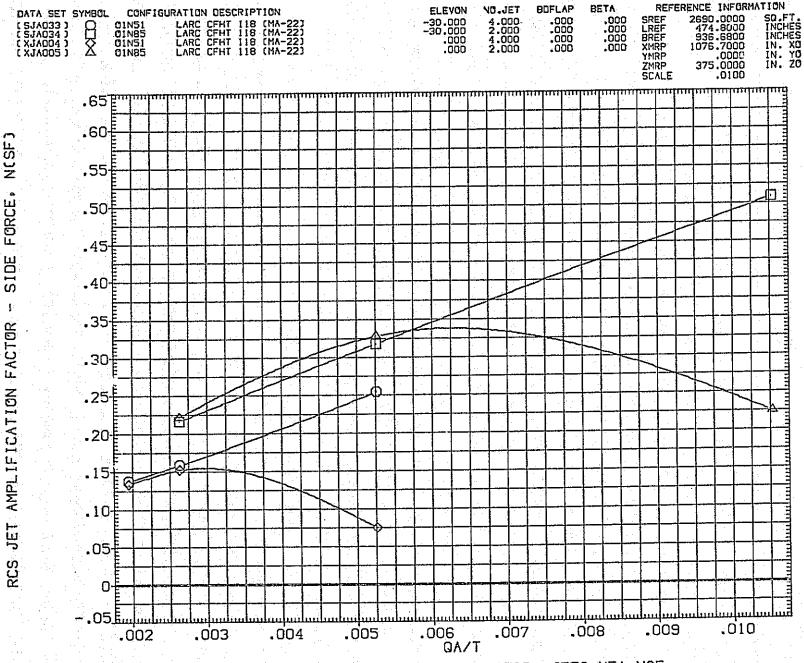


FIGURE 54. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N51,N85

(A)ALPHA = -8.00

PAGE 1042

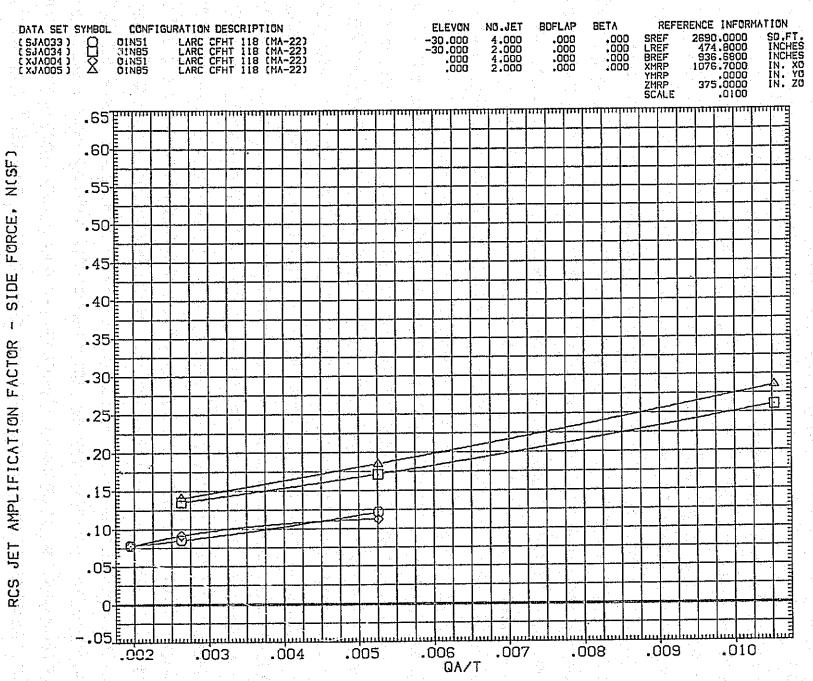


FIGURE 54. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N51, N85
(B) ALPHA = .00

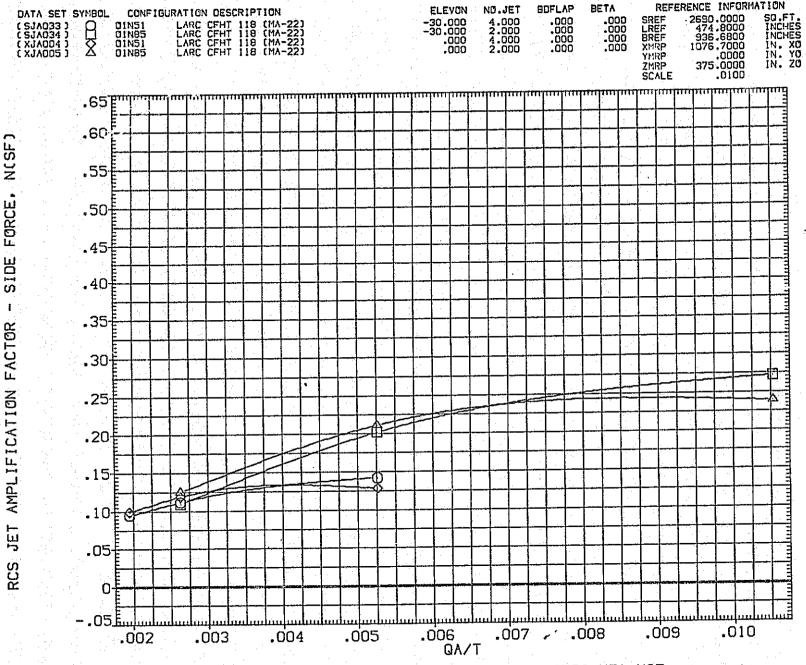


FIGURE 54. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N51,N85

CC)ALPHA = 10.00

PAGE 1044

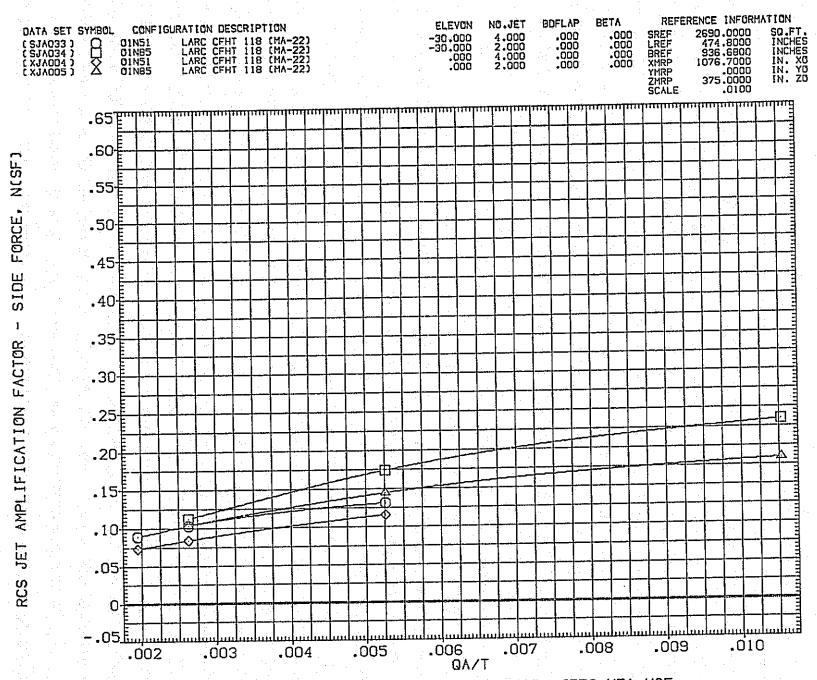


FIGURE 54. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N51, N85

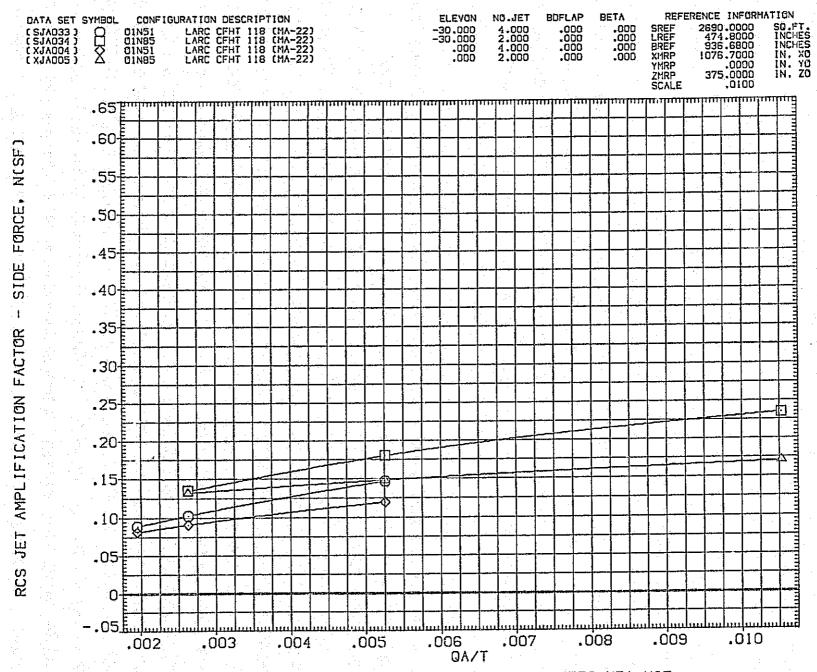


FIGURE 54. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N51, N85

(E) ALPHA = 35.00

PAGE

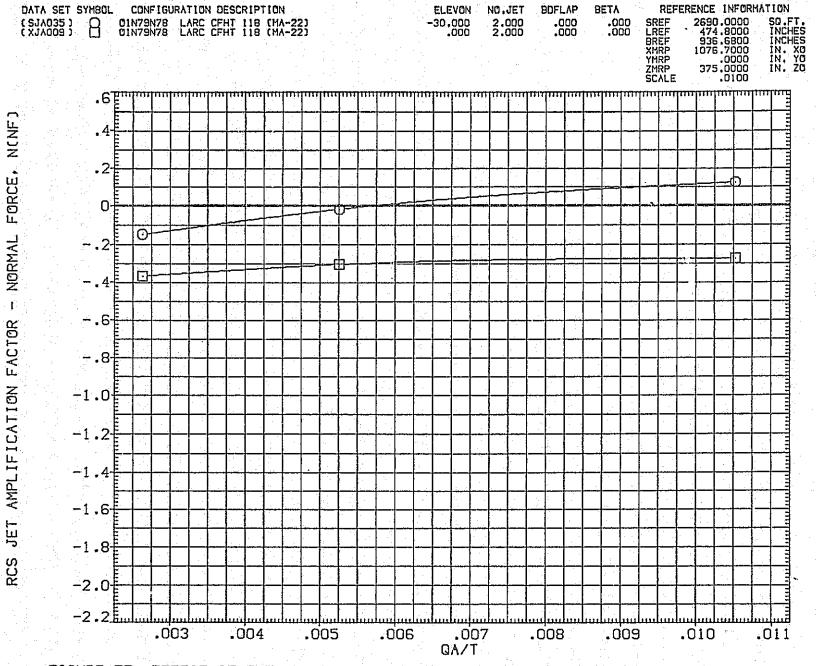


FIGURE 55. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79N78
(A)ALPHA = -8.00

REFERENCE INFORMATION

BDFLAP

NO.JET

FIGURE 55. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79N78 1048 PAGE (B)ALPHA = .00

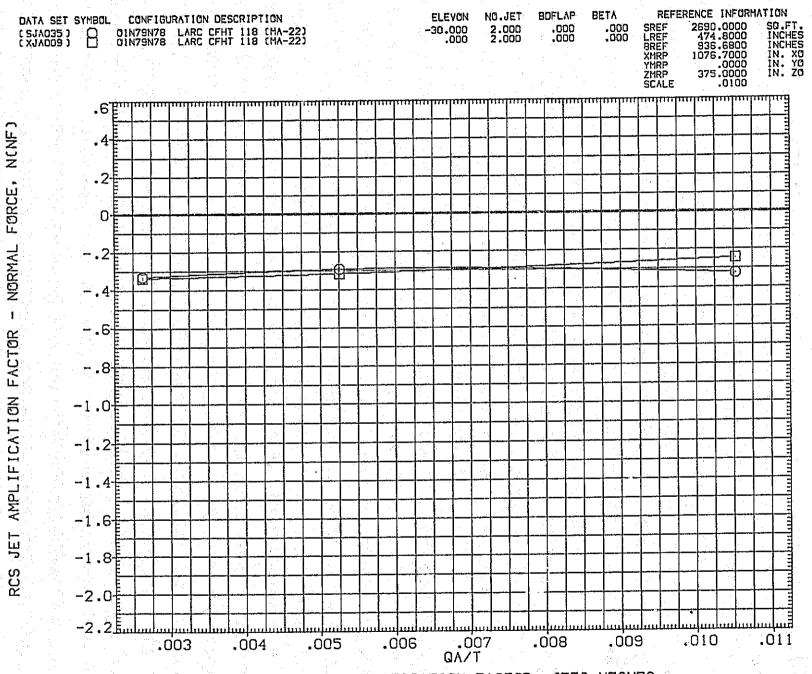


FIGURE 55. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79N78

REFERENCE INFORMATION

FIGURE 55. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79N78 PAGE (D) ALPHA = 20.00

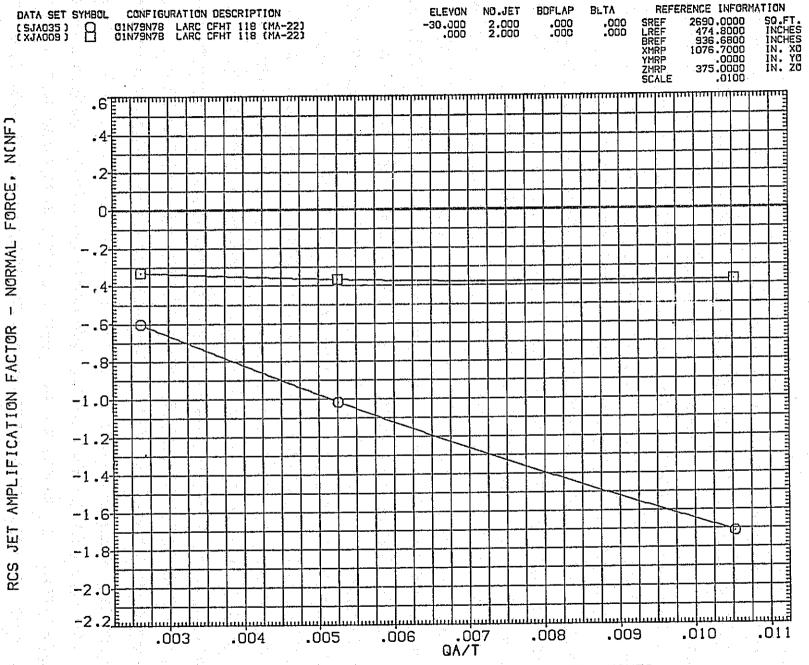


FIGURE 55. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79N78

FIGURE 55. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79N78 (A)ALPHA = -8.00

REFERENCE INFORMATION

BOFLAP

NO.JET

ELEVON

BETA

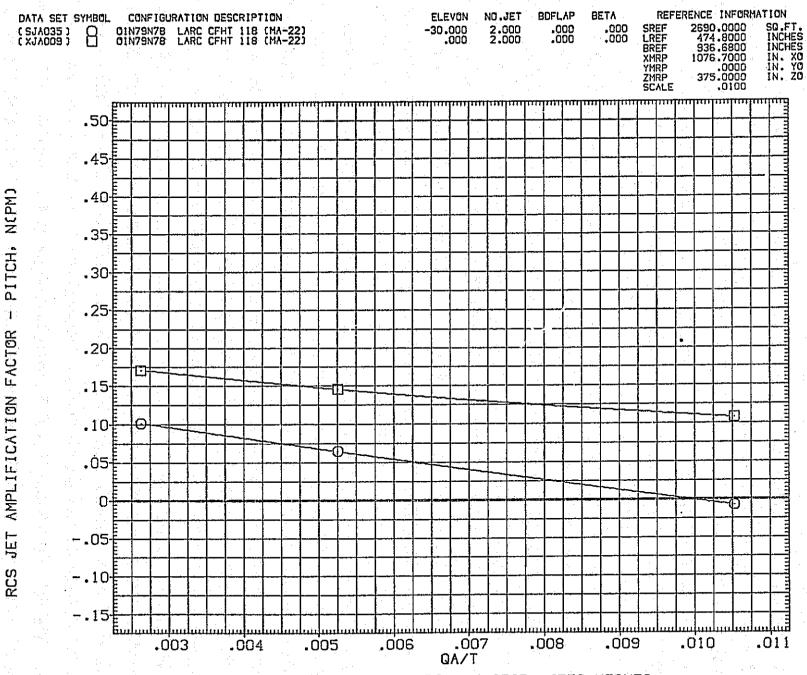


FIGURE 55. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79N78

PAGE 1053 ·

FIGURE 55. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79N78

CCJALPHA = 10.00 PAGE 1054

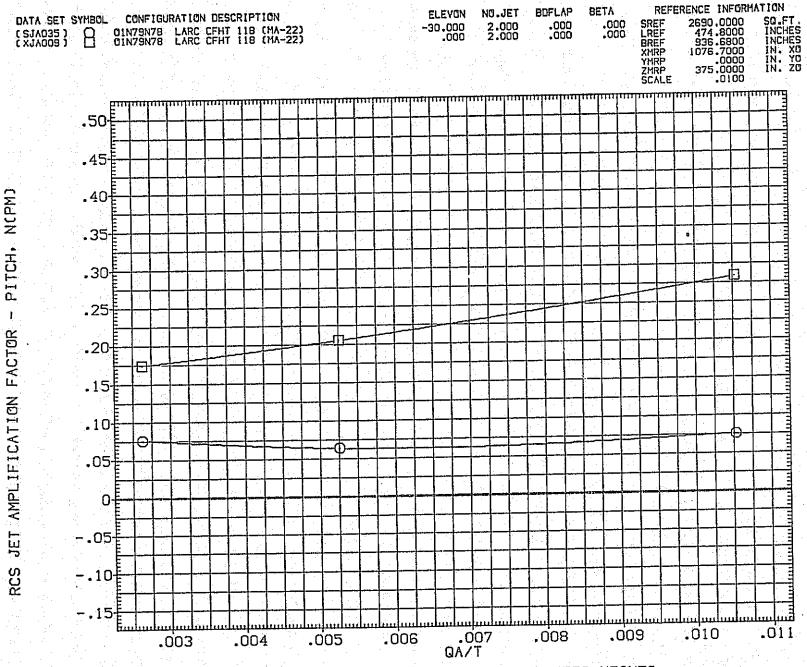


FIGURE 55. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79N78

FIGURE 55. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79N78

(E) ALPHA = 35.00

PAGE

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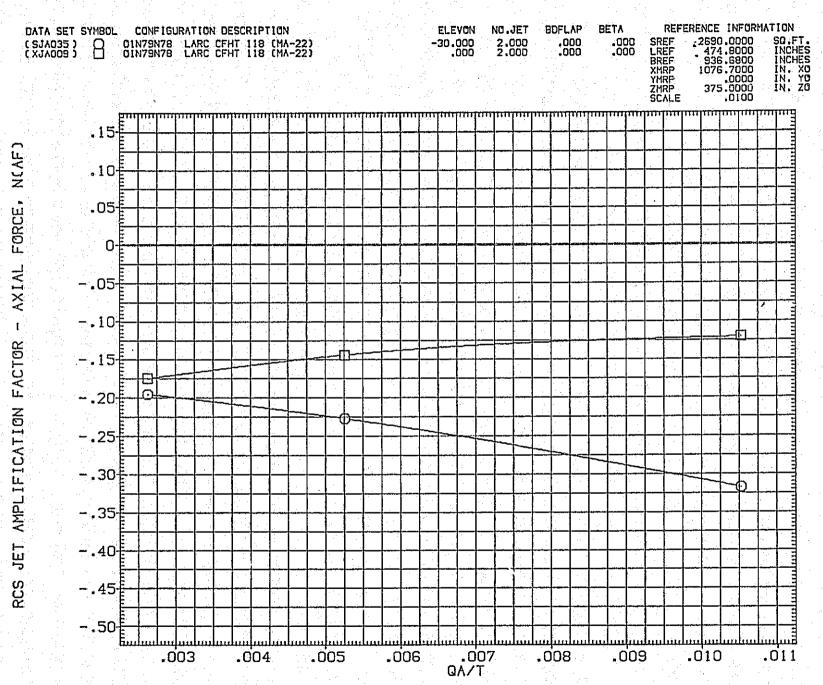
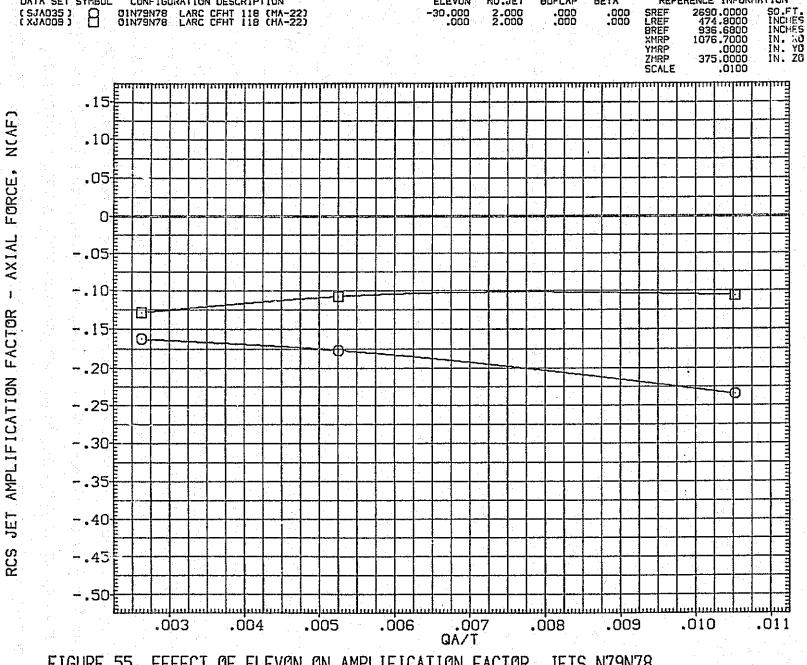


FIGURE 55. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79N78
(A)ALPHA = -8.00



ELEVON

NO.JET

BOFLAP

REFERENCE INFORMATION

DATA SET SYMBOL

CONFIGURATION DESCRIPTION

FIGURE 55. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79N78 PAGE 1058 (B)ALPHA =

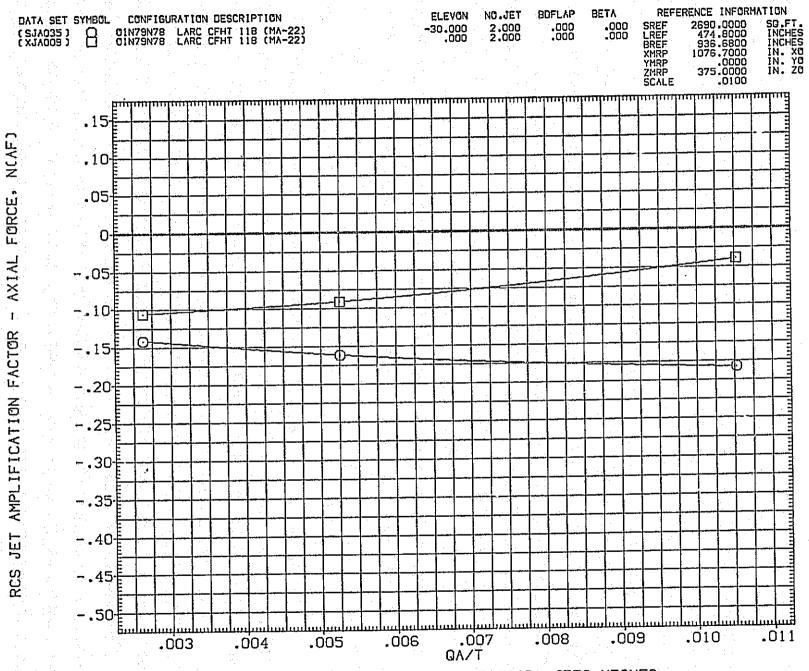
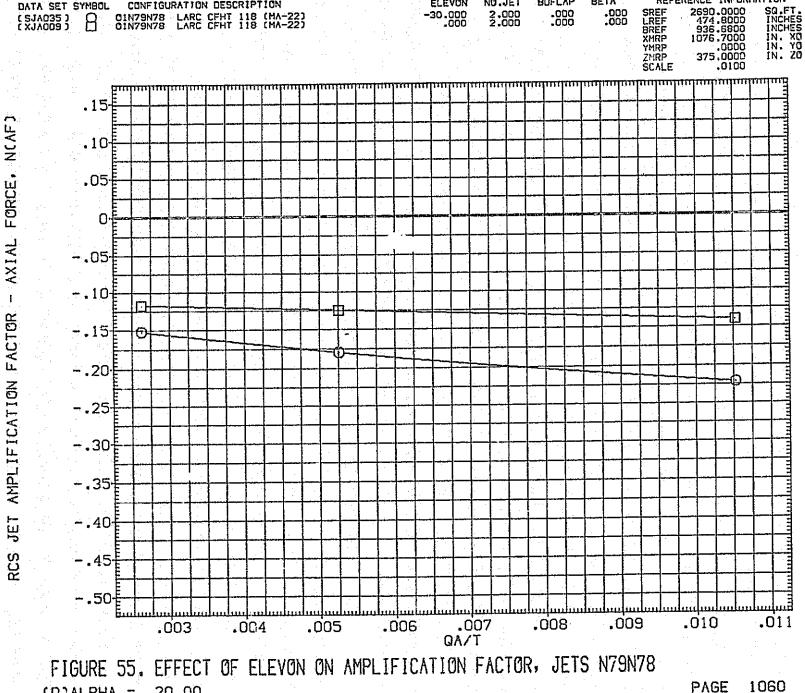


FIGURE 55. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79N78



CONFIGURATION DESCRIPTION

DATA SET SYMBOL

REFERENCE INFORMATION

BETA

BOFLAP

NO.JET

PAGE (D)ALPHA = 20.00

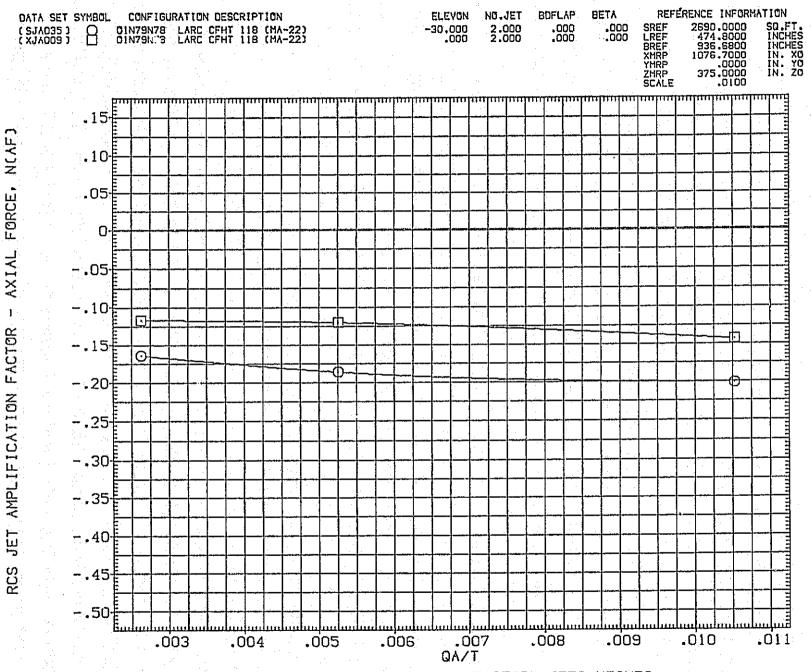


FIGURE 55. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79N78 (E)ALPHA = 35.00

FIGURE 55. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79N78

[A]ALPHA = -8.00

PAGE 1062

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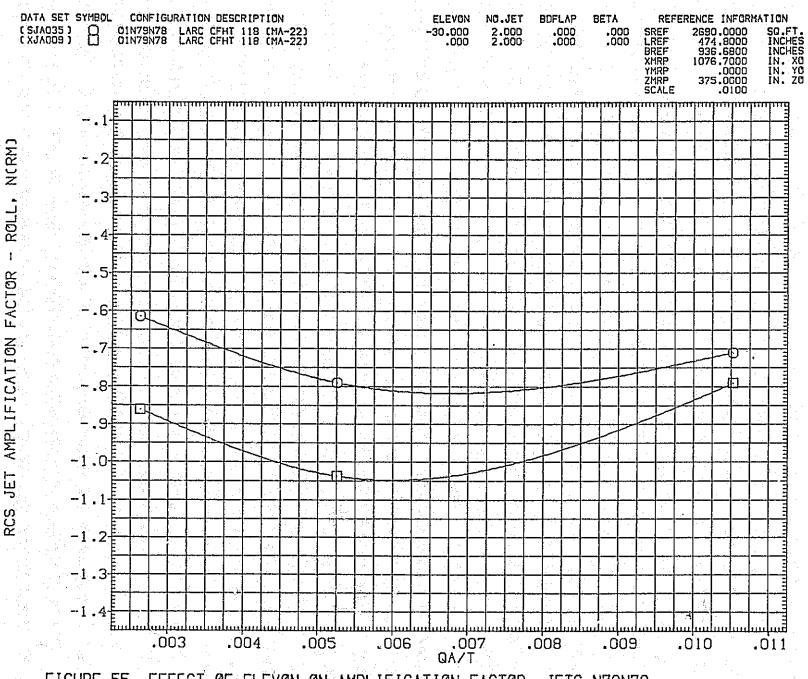


FIGURE 55. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79N78
(B)ALPHA = .00

ELEVON

CONFIGURATION DESCRIPTION

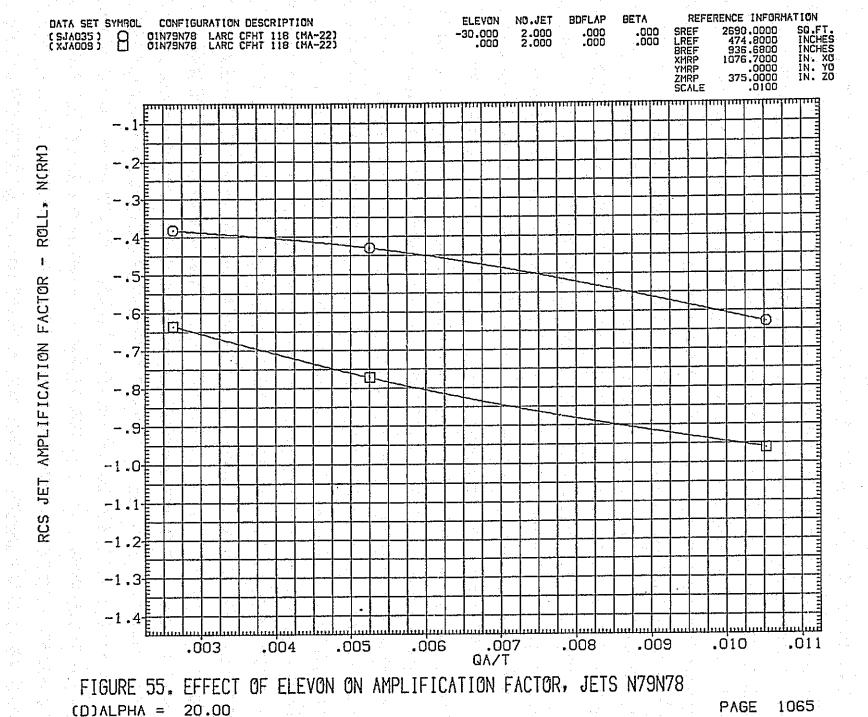
FIGURE 55. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79N78 (C)ALPHA = 10.00

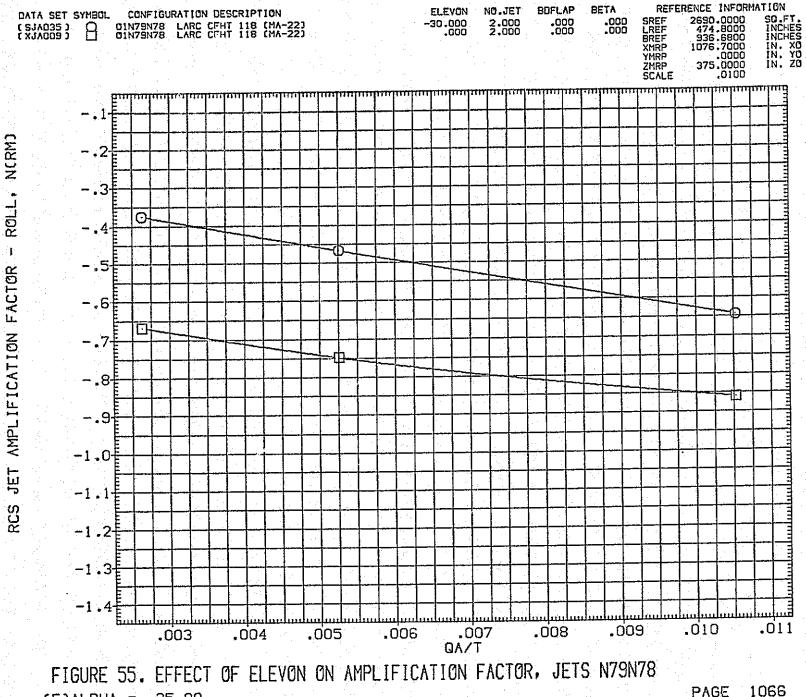
.004

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PAGE 1064

REFERENCE INFORMATION





PAGE (E)ALPHA = 35.00

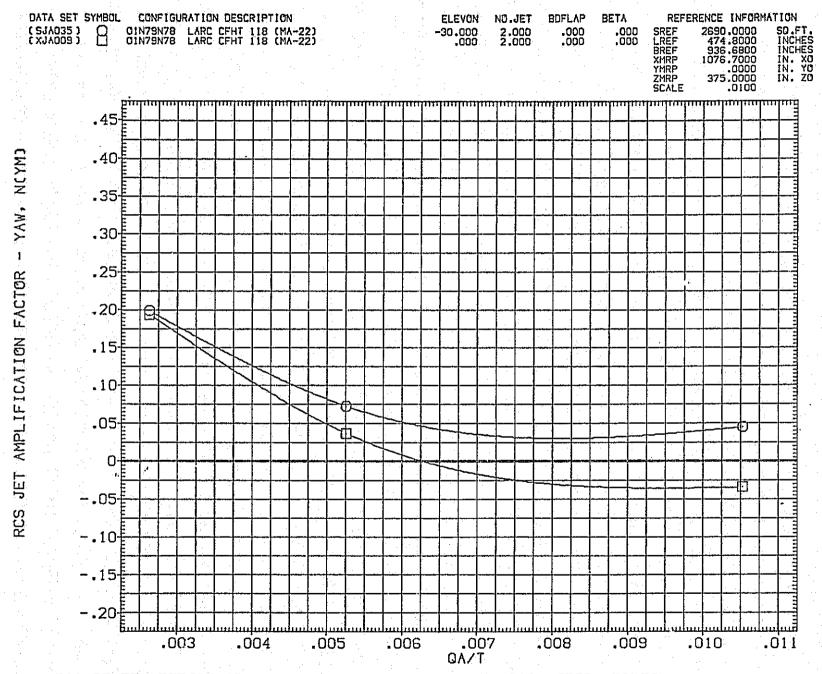


FIGURE 55. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79N78

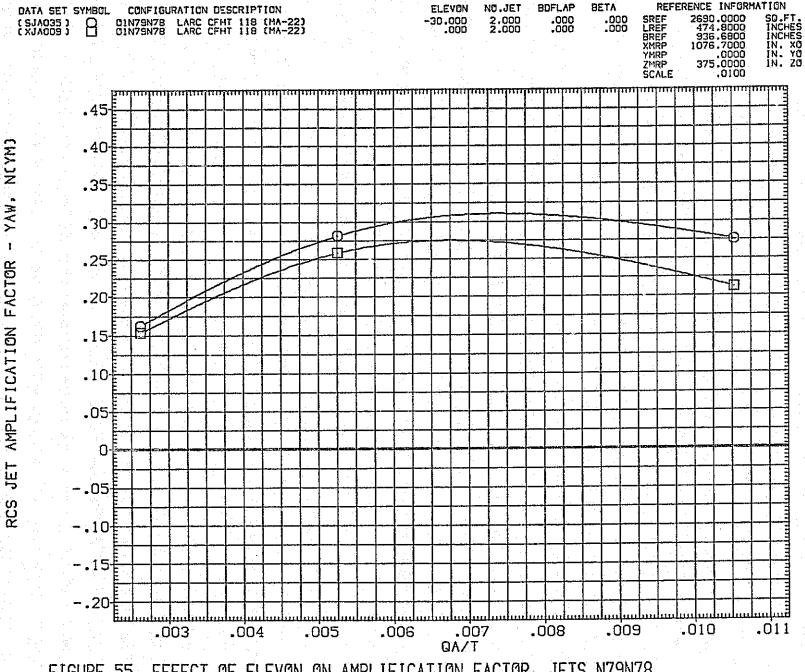


FIGURE 55. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79N78

(B)ALPHA = .00

PAGE 1068

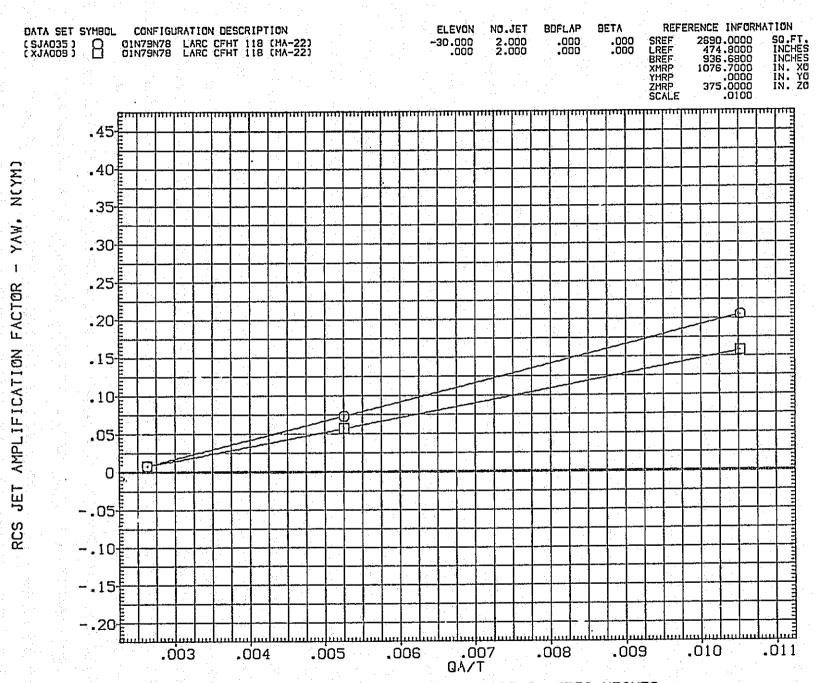


FIGURE 55. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79N78

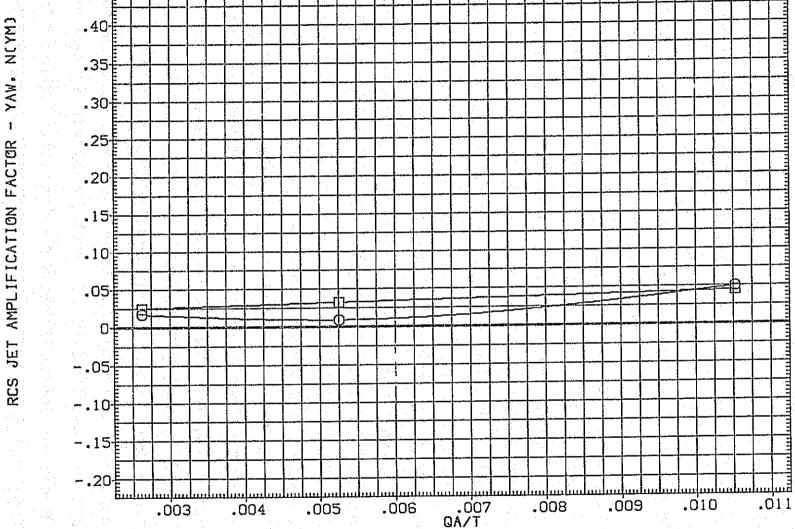


FIGURE 55. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79N78 PAGE (D) ALPHA = 20.00

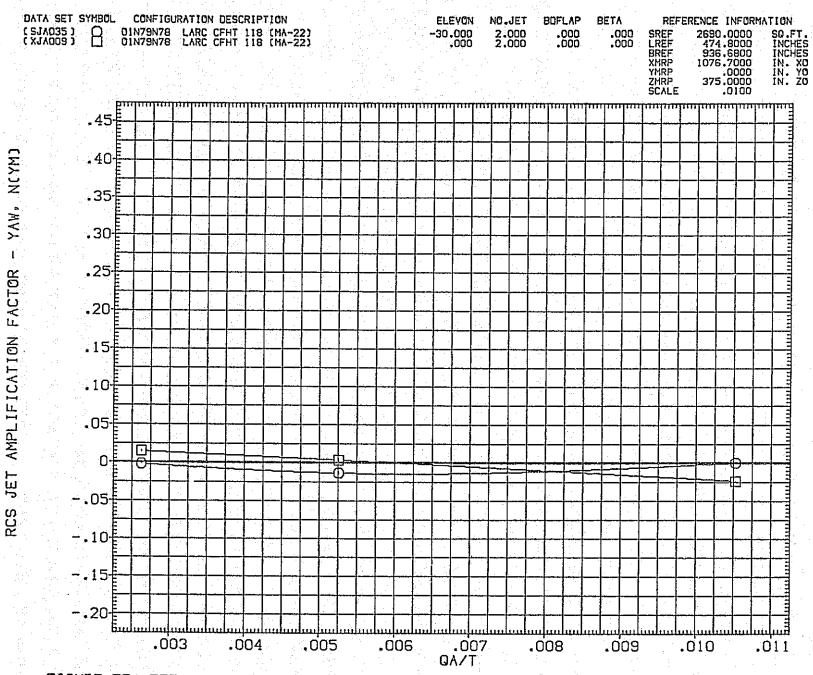


FIGURE 55. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79N78 (E)ALPHA = 35.00

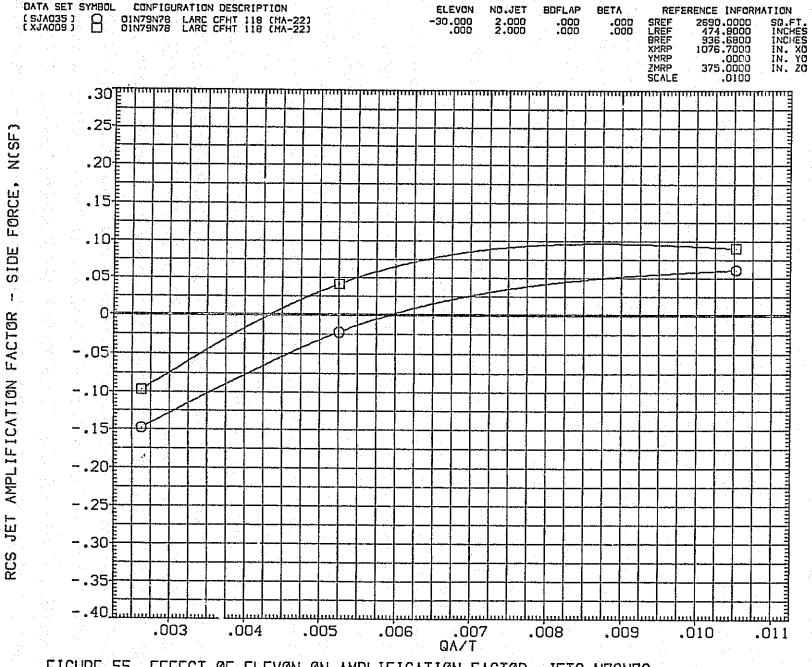


FIGURE 55. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79N78

[A]ALPHA = -8.00

PAGE

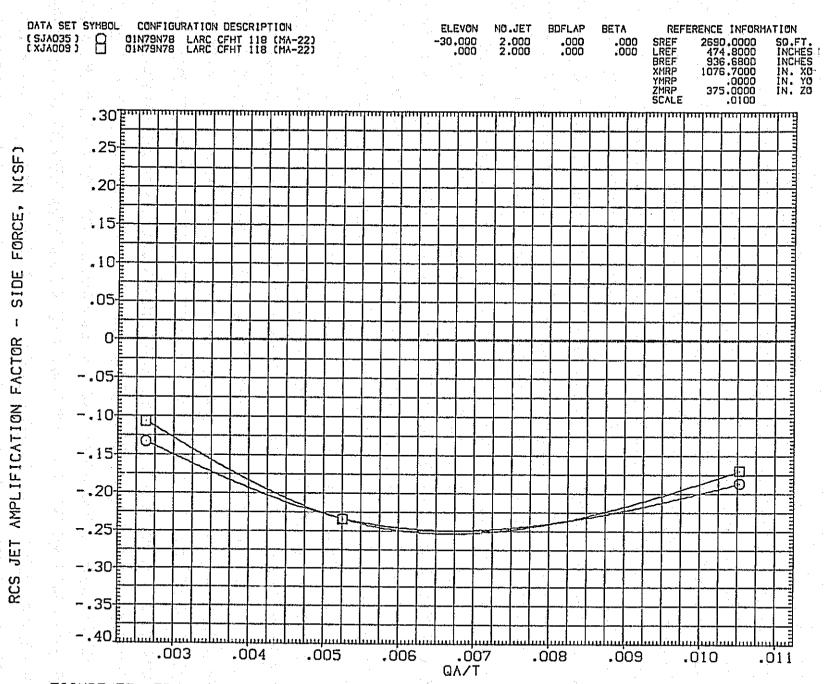


FIGURE 55. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79N78
(B)ALPHA = .00

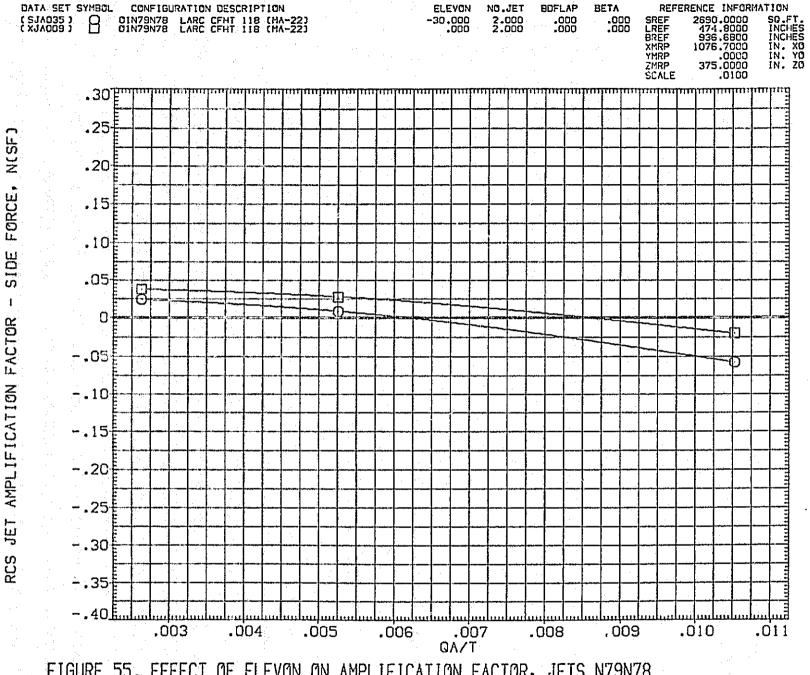


FIGURE 55. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79N78

(C) ALPHA = 10.00 PAGE 1074

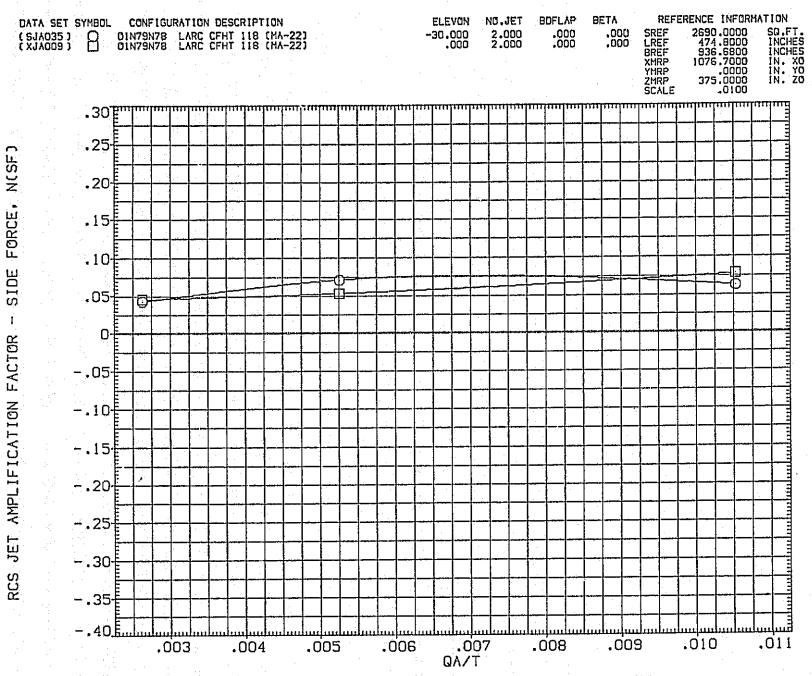


FIGURE 55. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N79N78

(D)ALPHA = 20.00

(E)ALPHA = 35.00

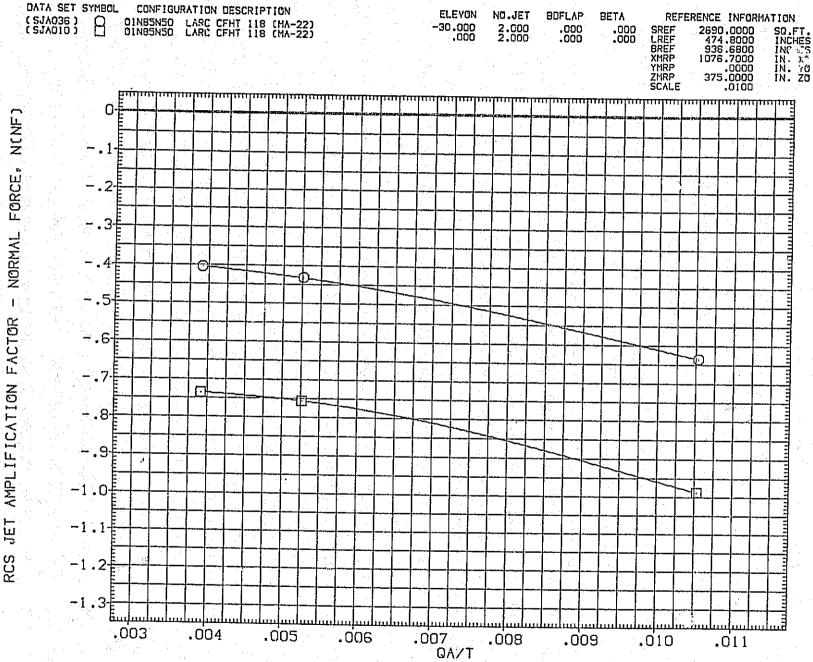
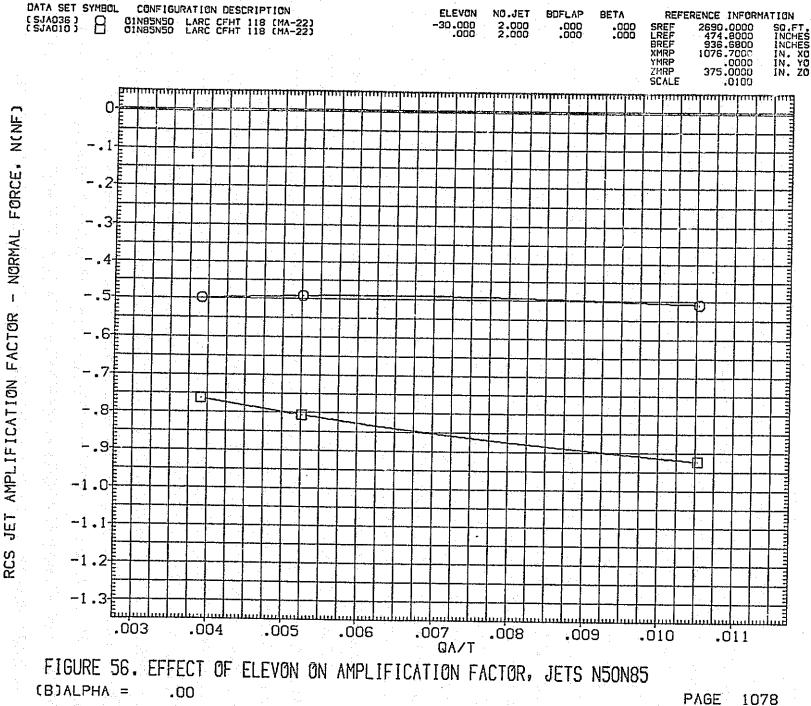


FIGURE 56. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N50N85



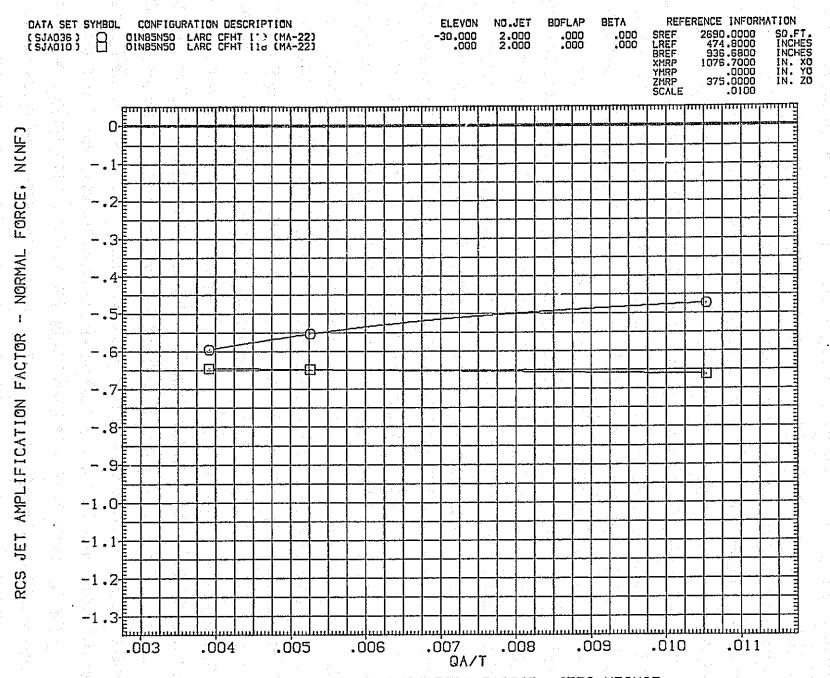


FIGURE 56. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N50N85

FIGURE 56. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N50N85

(D)ALPHA = 20.00

PAGE

QA/T

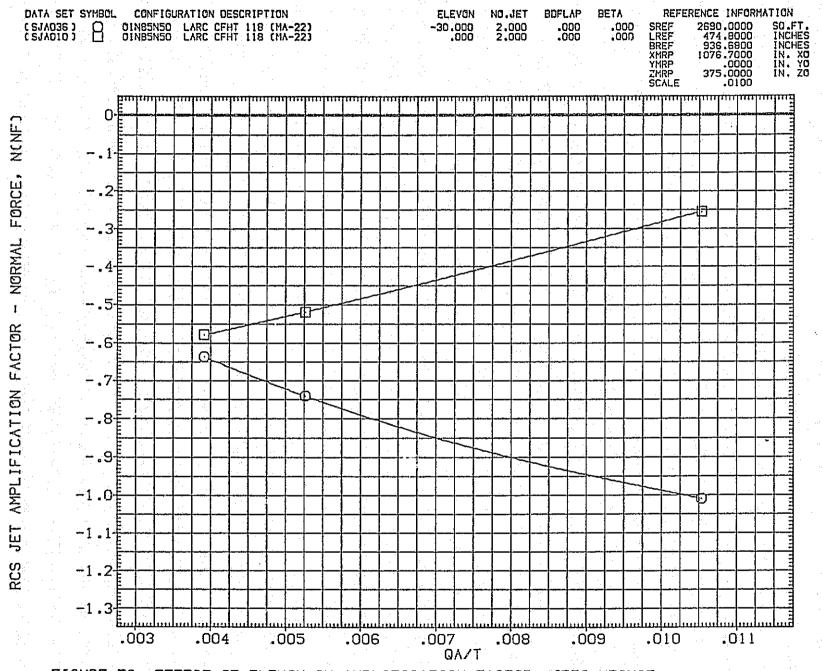
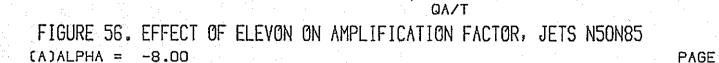


FIGURE 56. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N50N85
(E)ALPHA = 35.00



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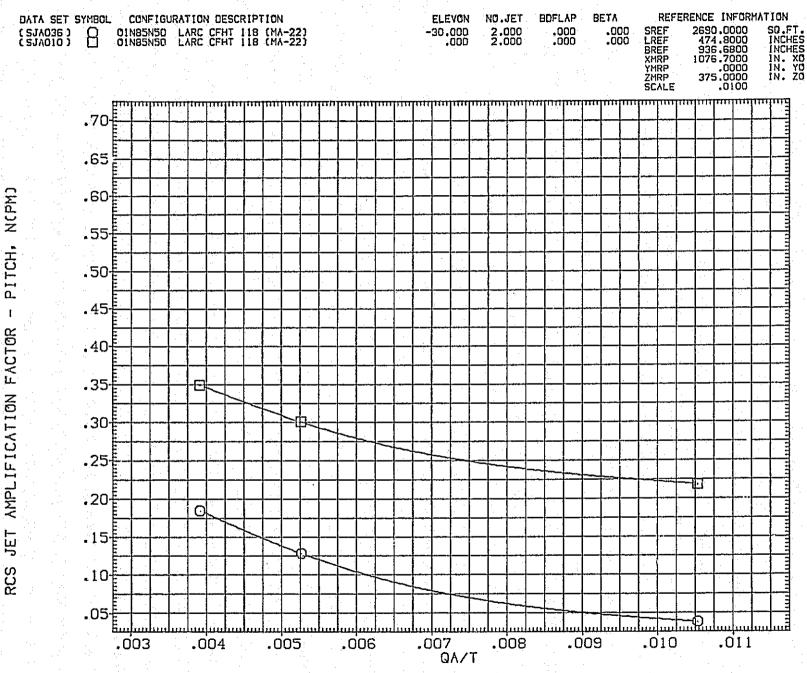


FIGURE 56. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N50N85

(B) ALPHA = .00

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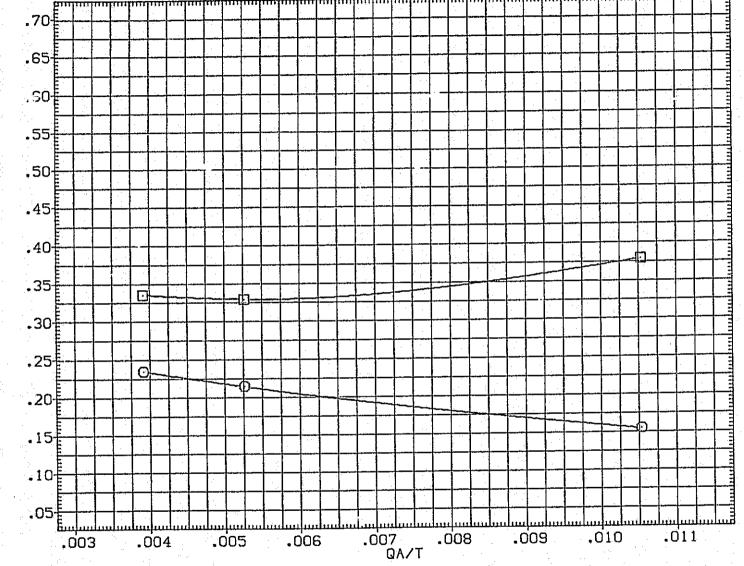


FIGURE 56. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N50N85 (C)ALPHA = 10.00

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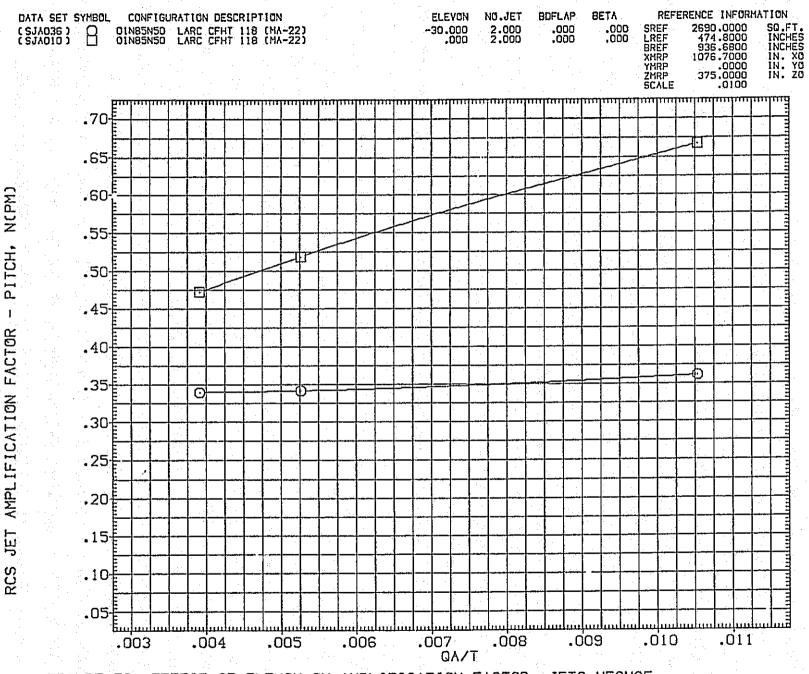


FIGURE 56. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N50N85

REFERENCE INFORMATION

1086

BETA

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NO.JET

ELEVON

FIGURE 56. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N50N85 PAGE (E)ALPHA = 35.00

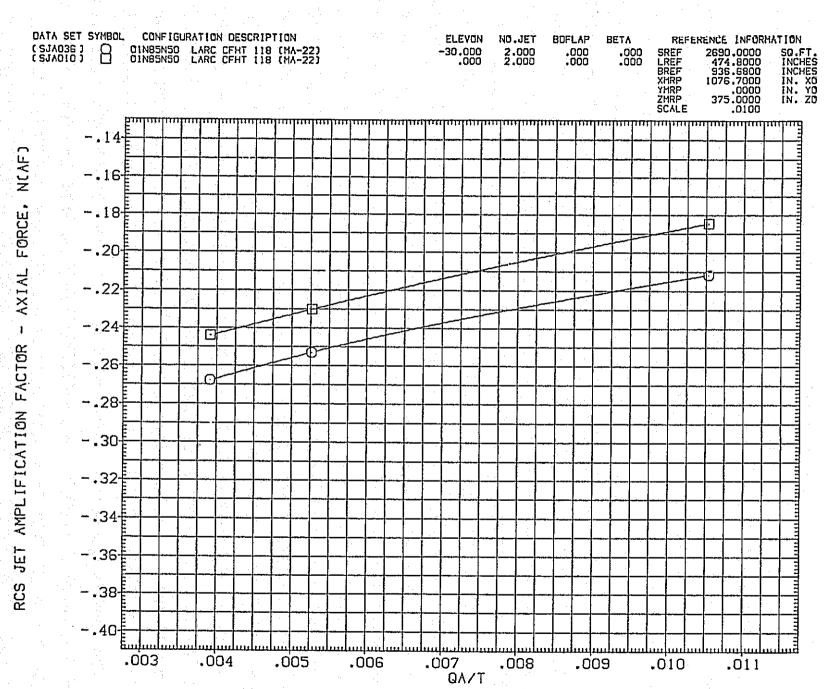


FIGURE 56. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N50N85

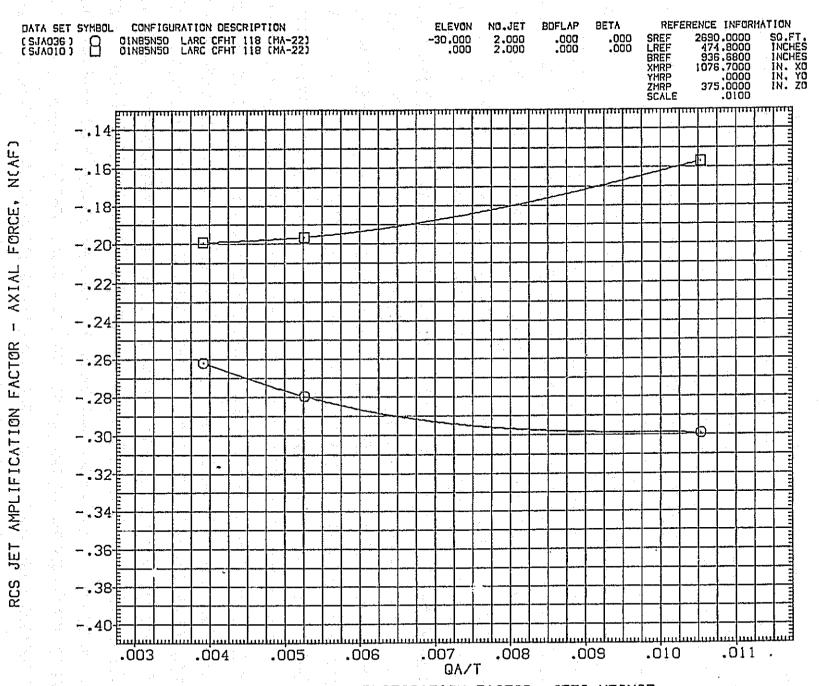


FIGURE 56. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N50N85

FIGURE 56. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N50N85

(D)ALPHA = 20.00

PAGE 1090

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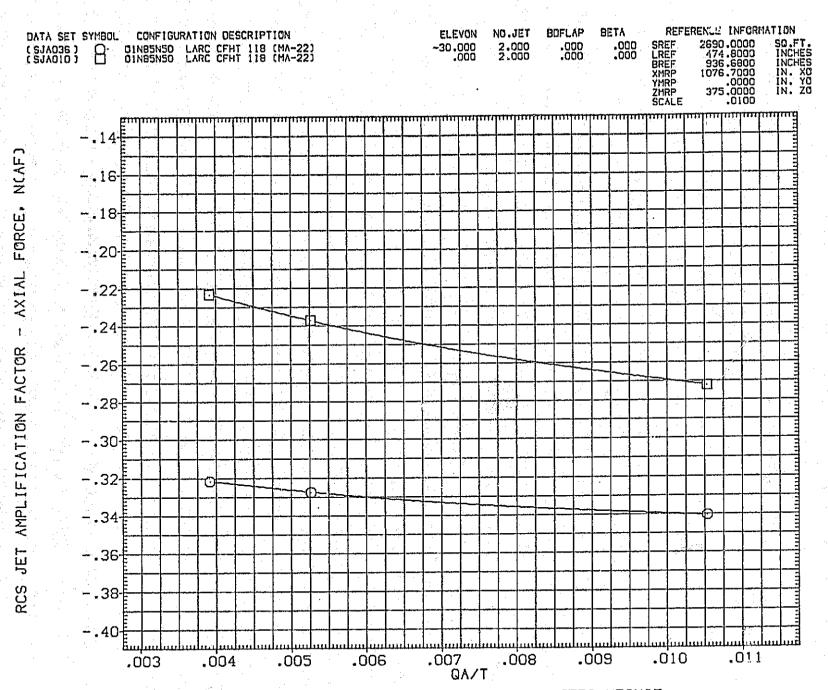


FIGURE 56. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N50N85

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N(RM)

ROLL

AMPLIFICATION FACTOR

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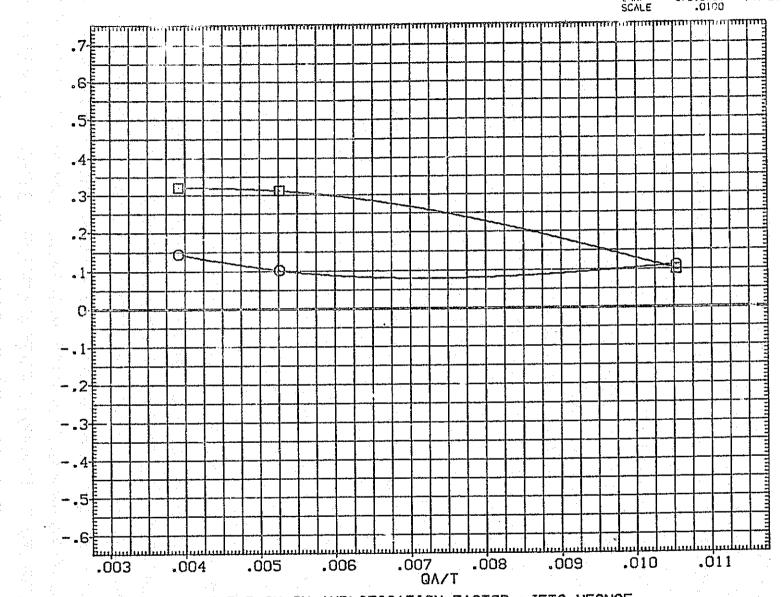


FIGURE 56. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N50N85

(A)ALPHA = -8.00

PAGE

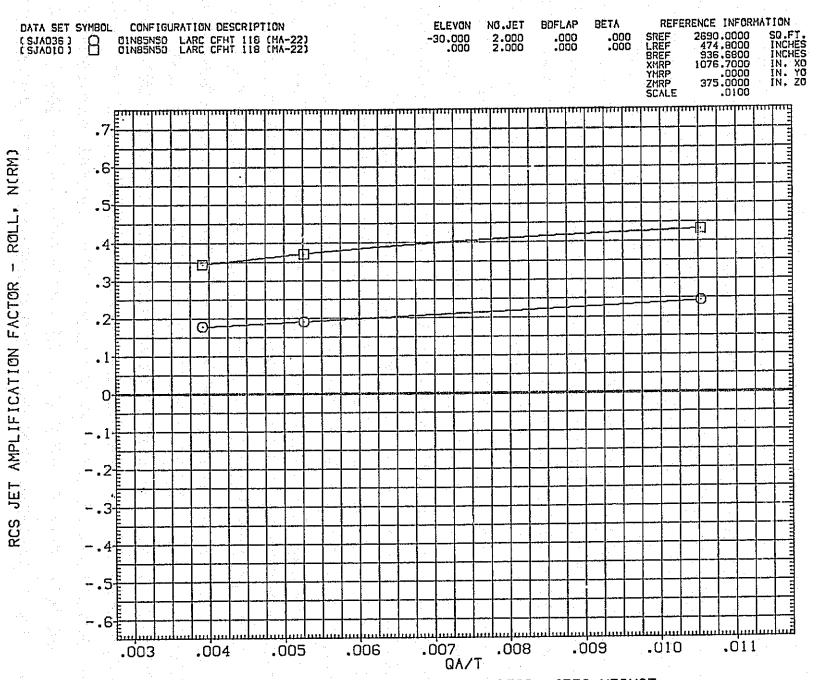


FIGURE 56. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N50N85
(B) ALPHA = .00

N(RM)

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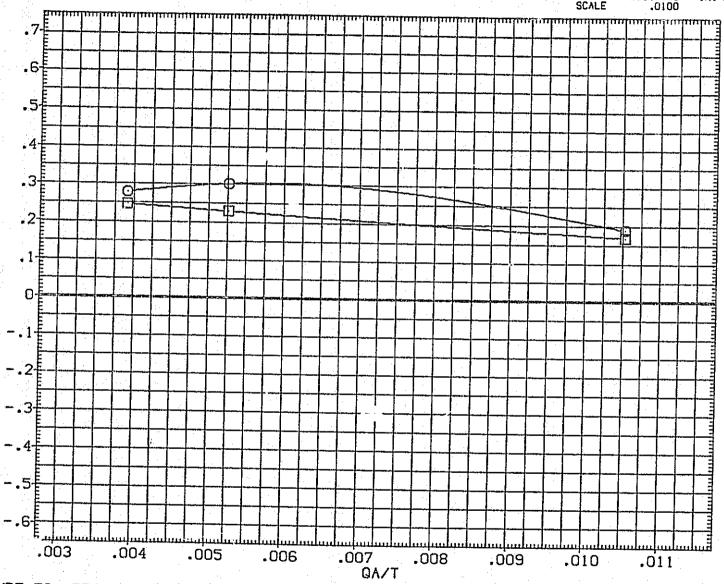
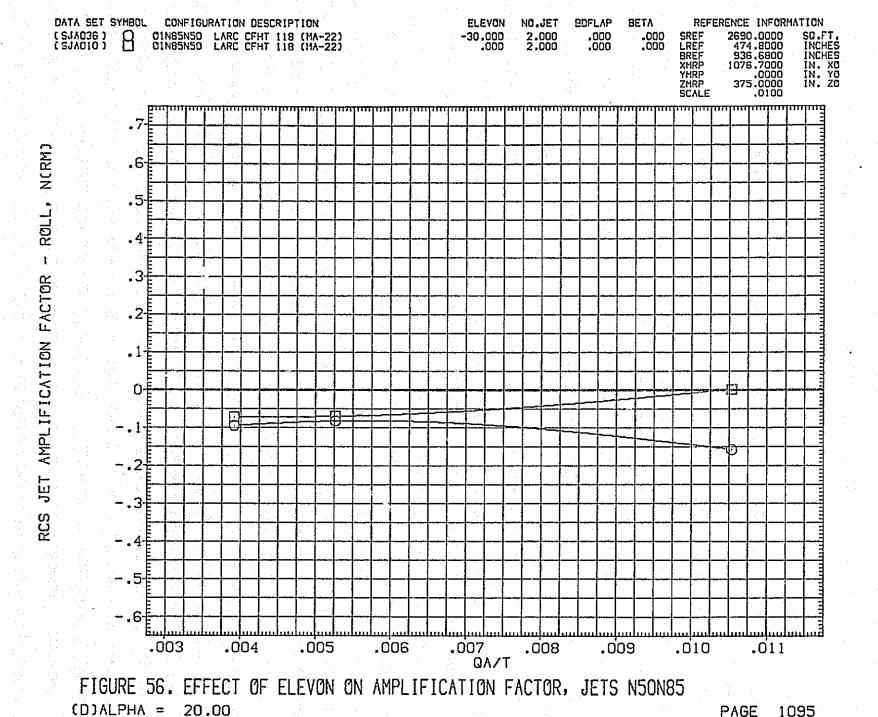


FIGURE 56. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N50N85



ELEVON

DATA SET SYMBOL

CONFIGURATION DESCRIPTION

NO.JET

BOFLAP

BETA

REFERENCE INFORMATION

FIGURE 56. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N50N85 1096 PAGE (E)ALPHA =35.00

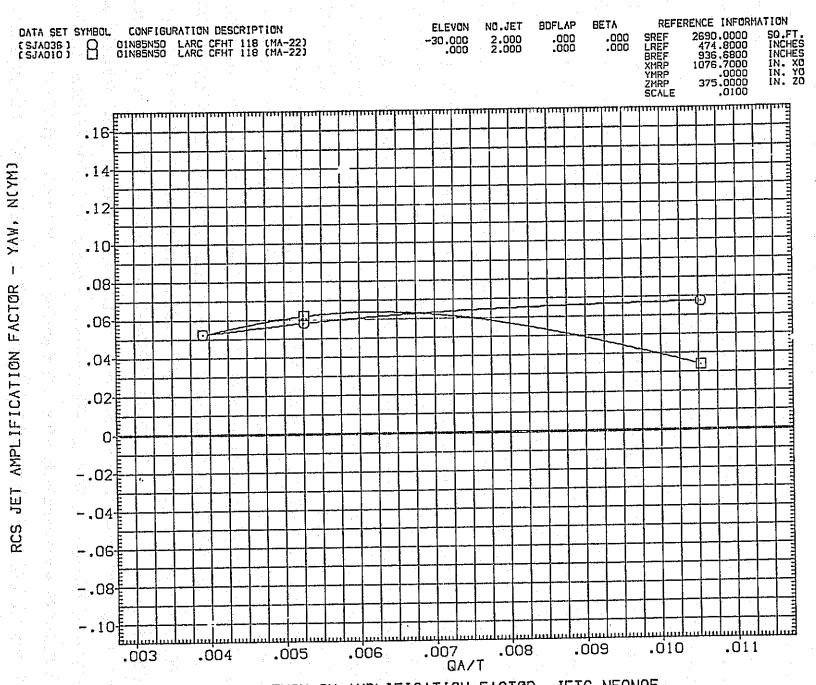


FIGURE 56. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N50N85

YAW. NCYMJ

FACTOR

JET AMPLIFICATION

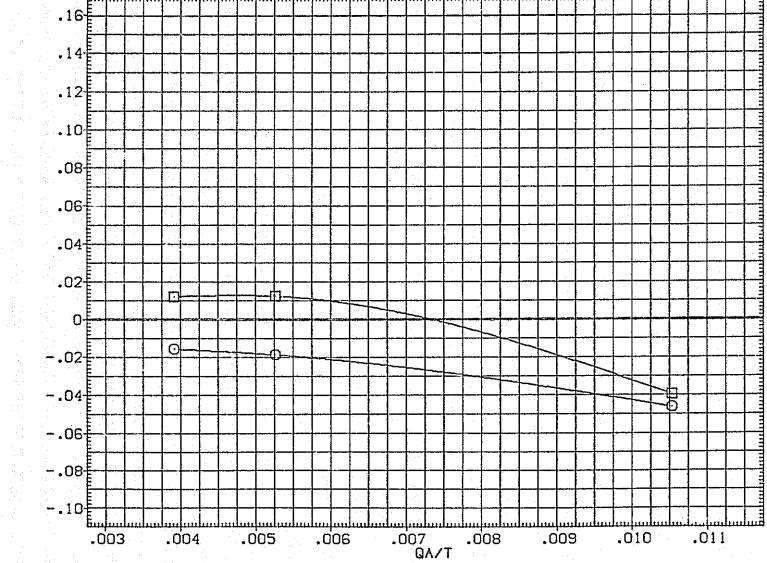


FIGURE 56. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N50N85

(B) ALPHA = .00

PAGE 1098

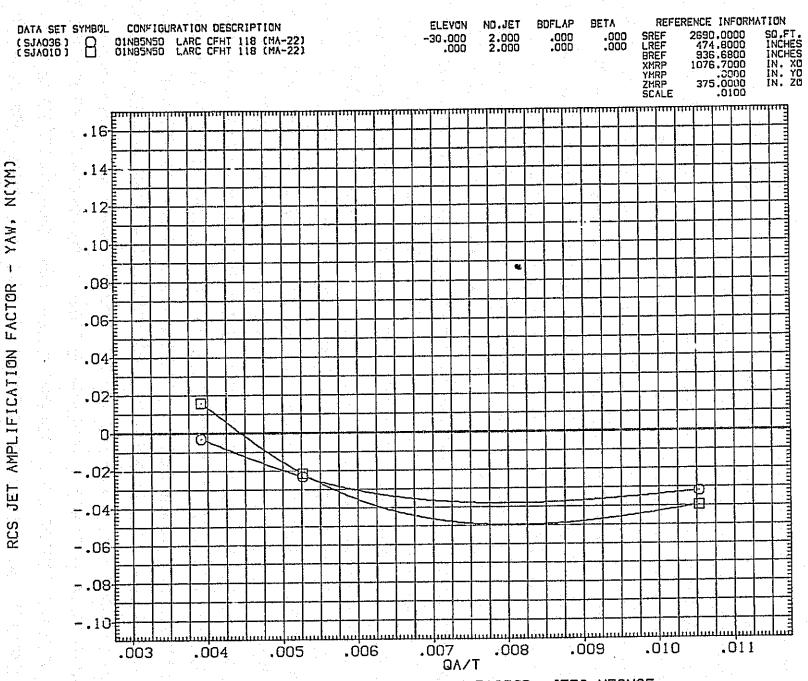
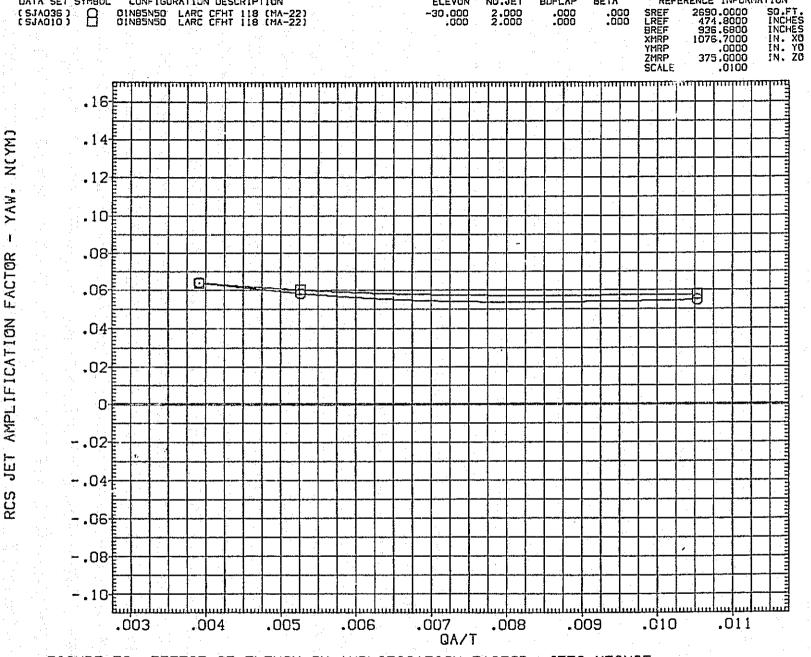


FIGURE 56. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N50N85



BETA

REFERENCE INFORMATION

CONFIGURATION DESCRIPTION

FIGURE 56. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N50N85 (D)ALPHA = 20.00PAGE 1100

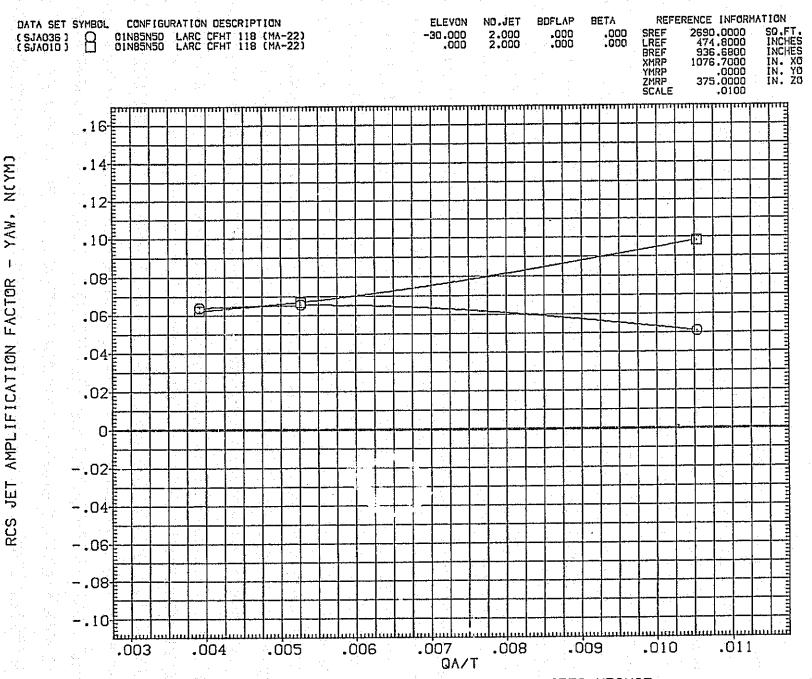


FIGURE 56. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N50N85

(E)ALPHA = 35.00

PAGE

1101

PAGE 1102 (A)ALPHA = -8.00

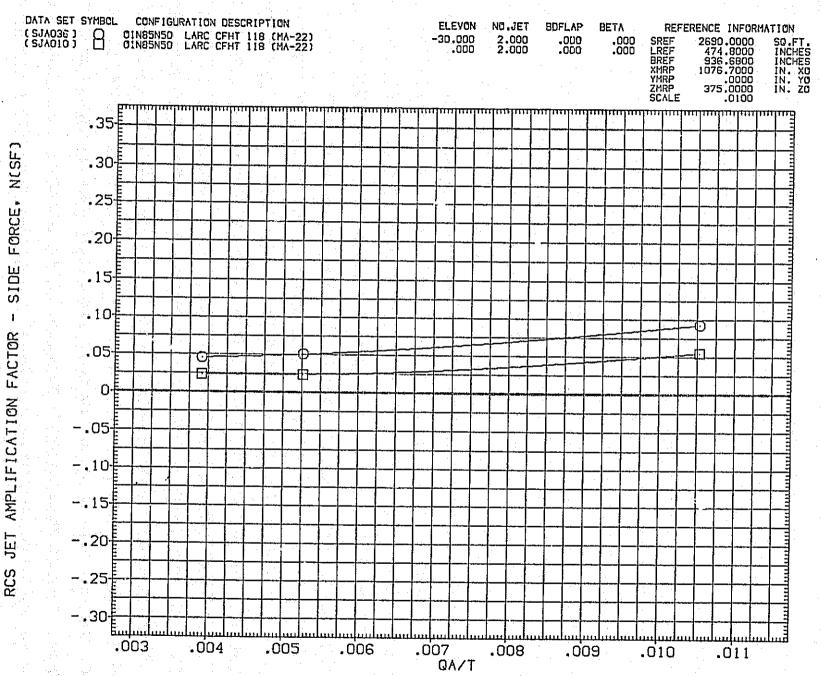
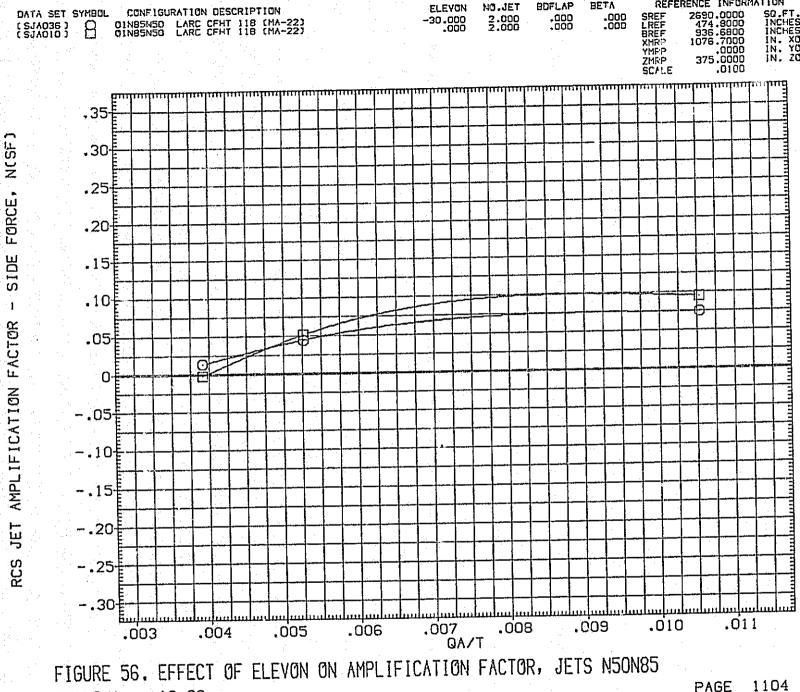


FIGURE 56. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N50N85
(B)ALPHA = .00



REFERENCE INFORMATION

PAGE (C)ALPHA = 10.00

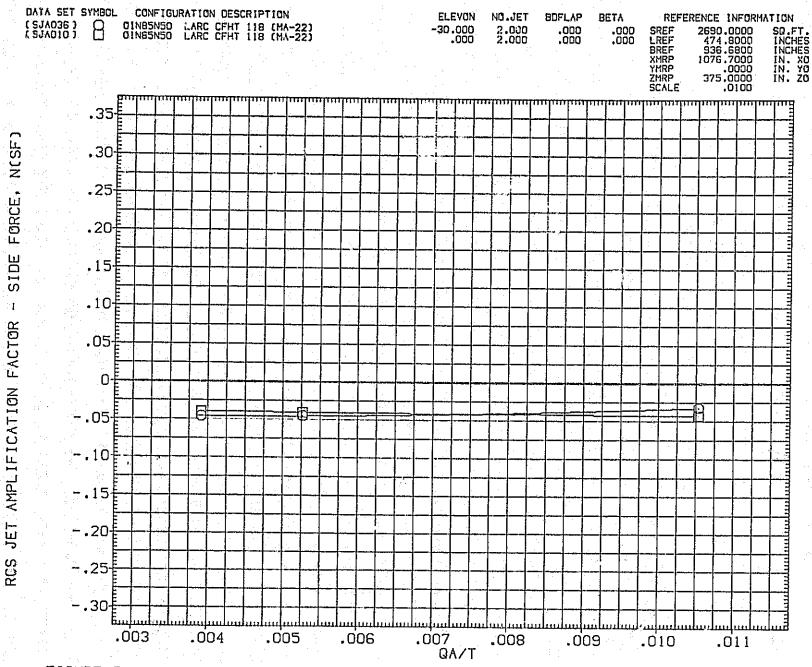
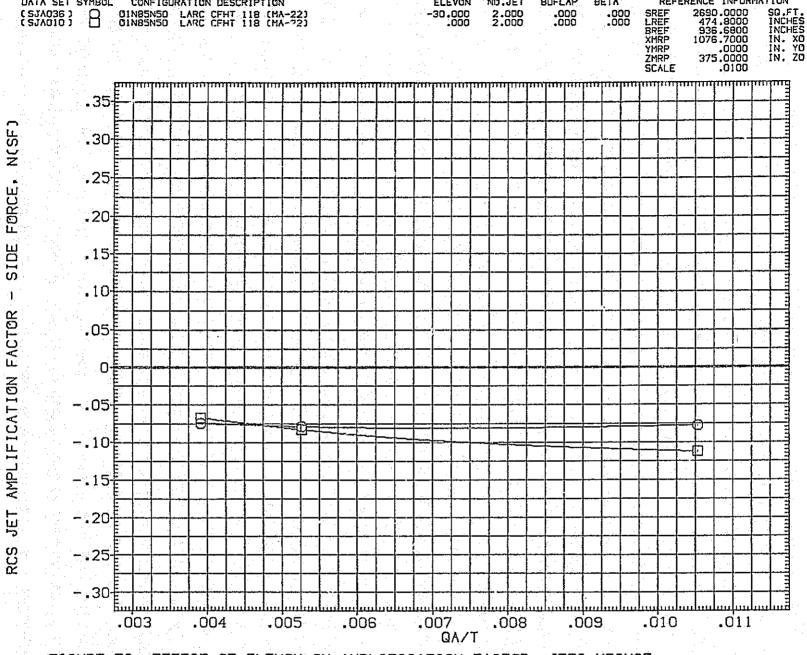


FIGURE 56. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N50N85

DATA SET SYMBOL

CONFIGURATION DESCRIPTION

01N85N50 LARC CFHT 118 (MA-22) 01N85N50 LARC CFHT 118 (MA-72)



BOFLAP

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NO.JET

2.000

-30.000

FIGURE 56. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N50N85 (E)ALPHA = 35.00

PAGE 1108

REFERENCE INFORMATION

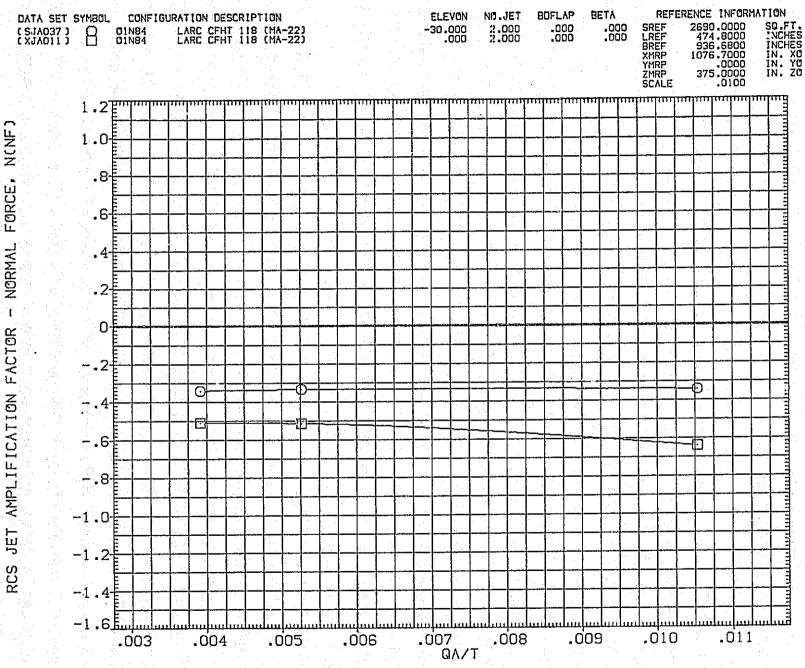
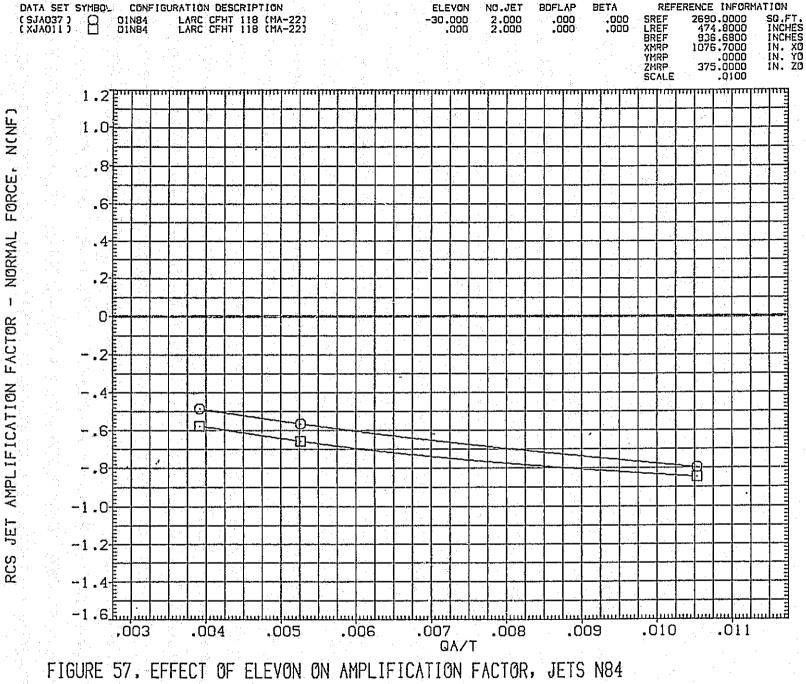


FIGURE 57. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N84
(A)ALPHA = -8.00



(B)ALPHA =

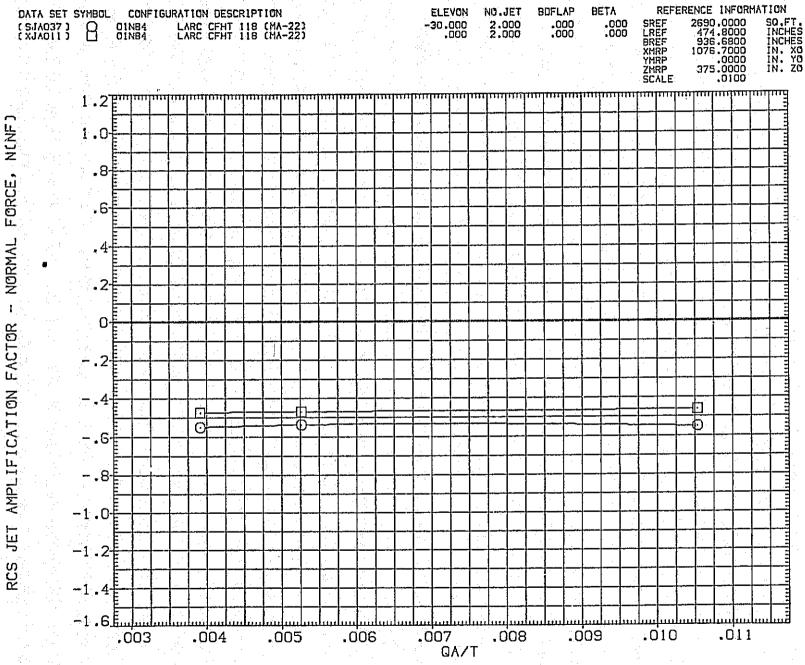


FIGURE 57. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N84

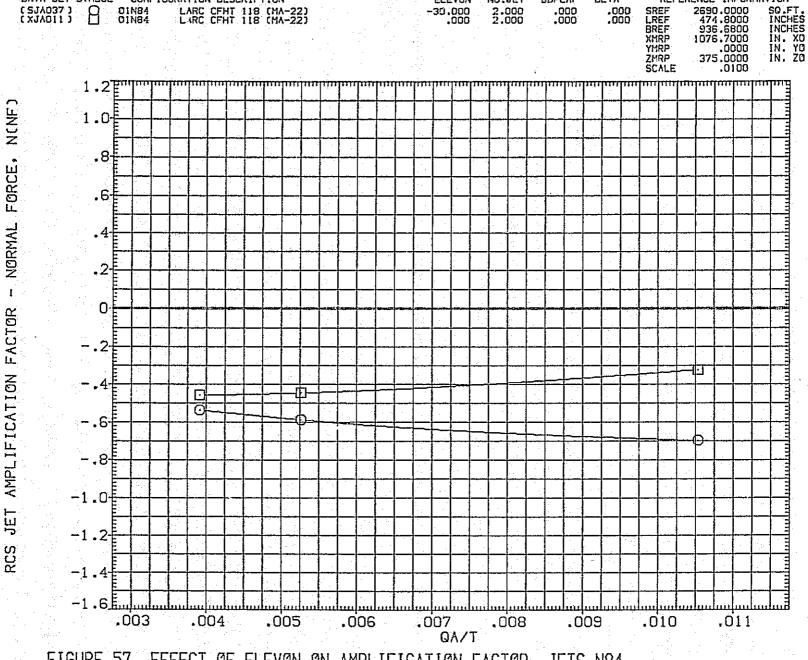


FIGURE 57. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N84 CD) ALPHA = 20.00

DATA SET SYMBOL

CONFIGURATION DESCRIPTION

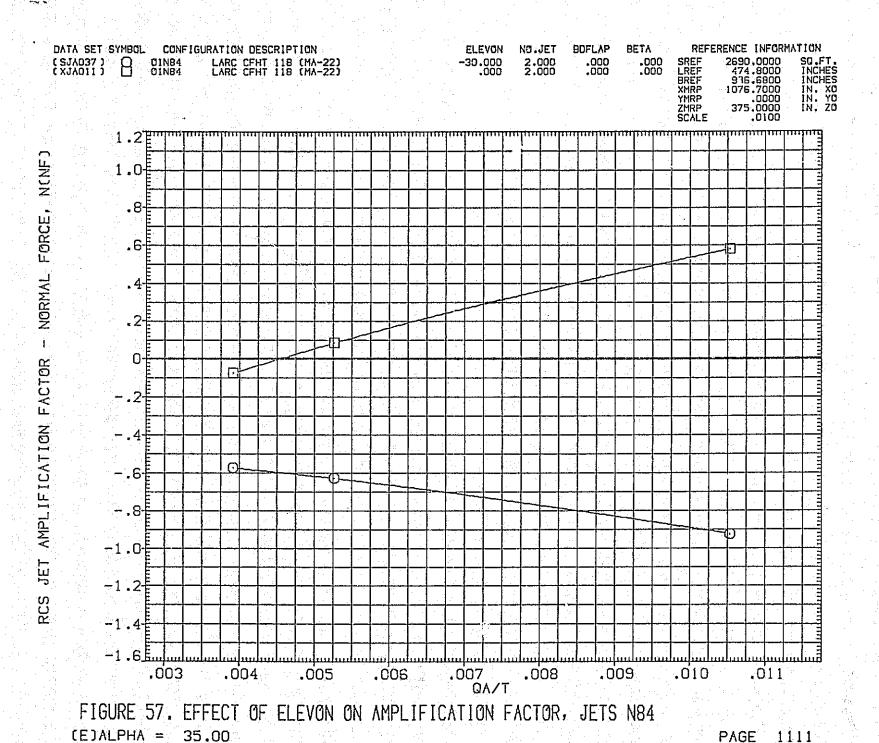
PAGE 1110

REFERENCE INFORMATION

BDFLAP

ELEVON

BETA



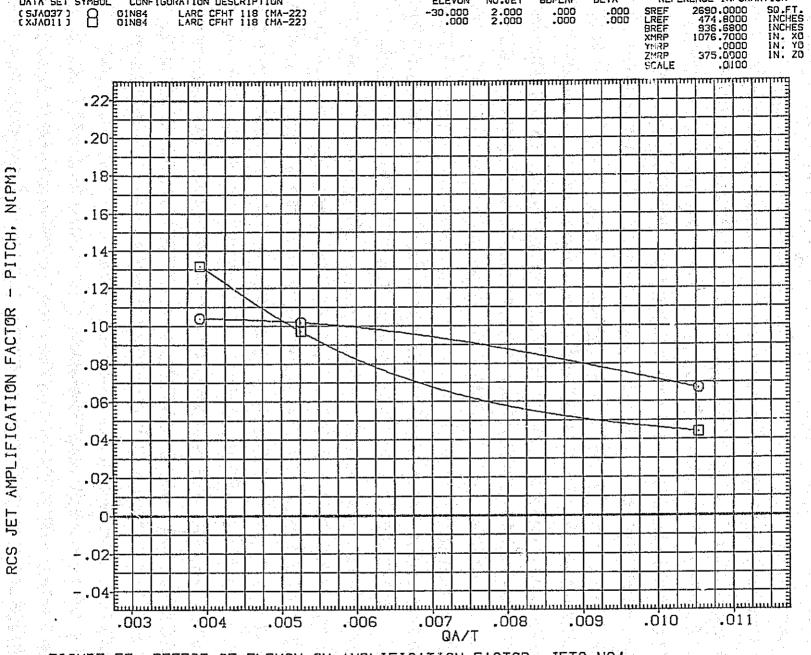


FIGURE 57. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N84 PAGE 1112 (A)ALPHA = -8.00

BDFLAP

ELEVON

DATA SET SYMBOL

CONFIGURATION DESCRIPTION

NO.JET

BETA

REFERENCE INFORMATION

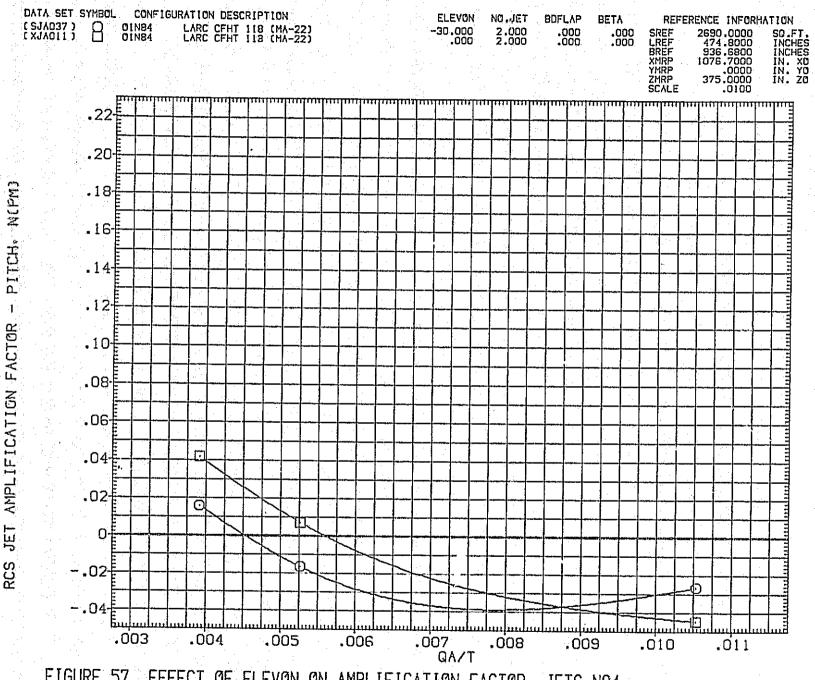


FIGURE 57. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N84

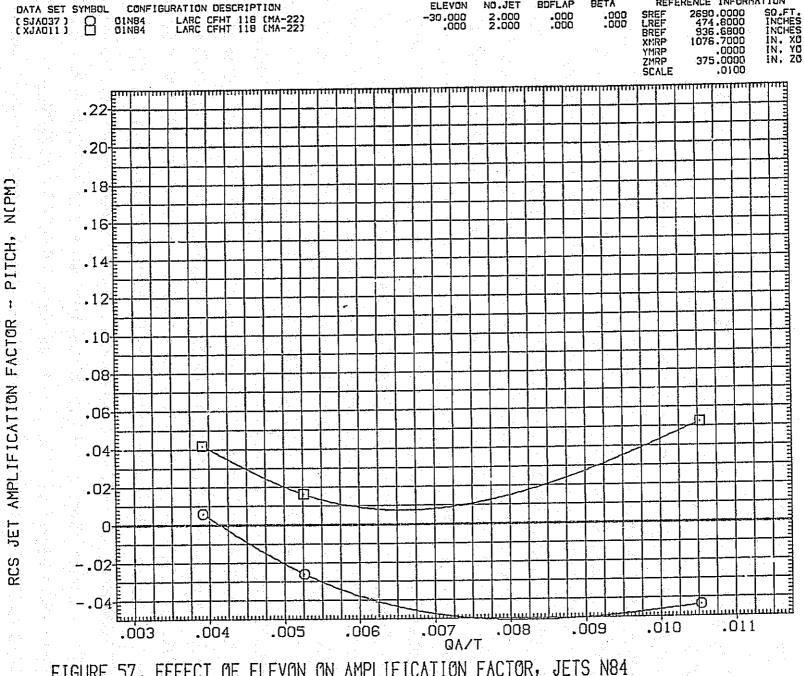


FIGURE 57. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N84 (C)ALPHA = 10.00

REFERENCE INFORMATION

BETA

BDFLAP

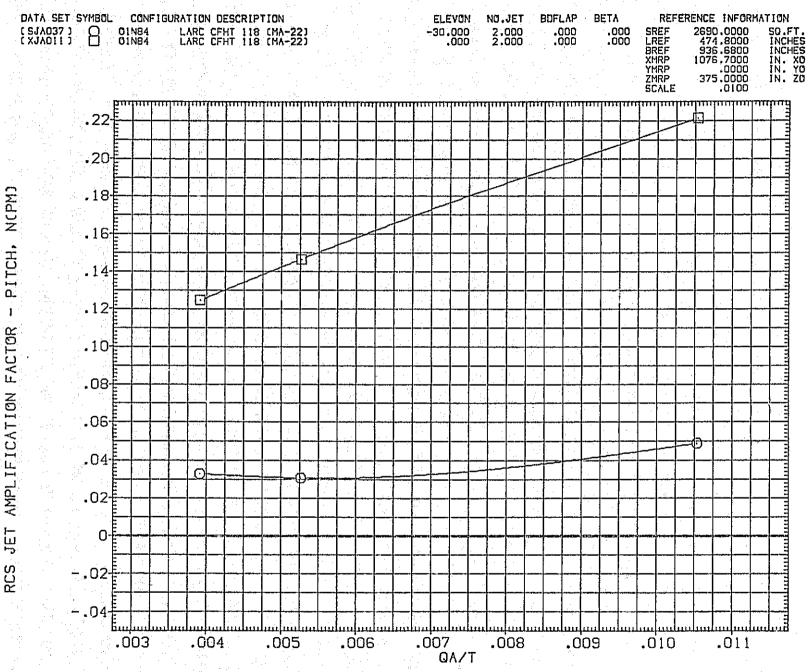


FIGURE 57. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N84 (D)ALPHA = 20.00

FIGURE 57. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N84

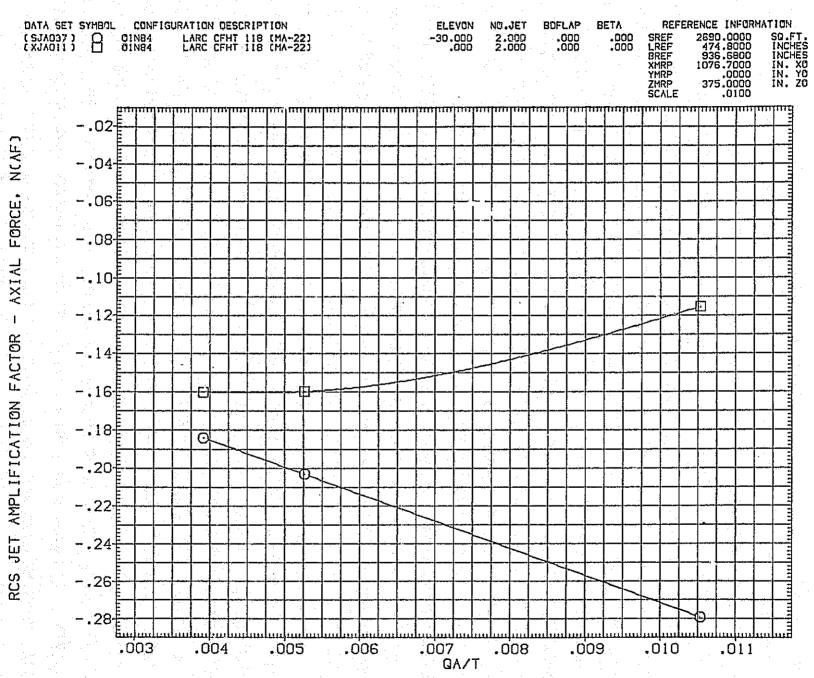


FIGURE 57. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N84

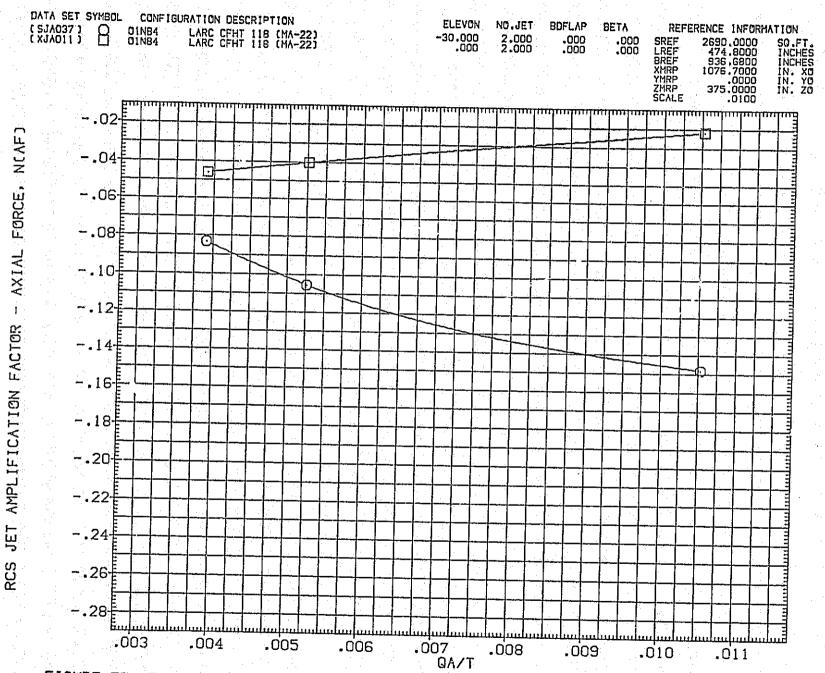


FIGURE 57. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N84

QA/T

FIGURE 57. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N84
[D]ALPHA = 20.00

PAGE 1120 ·



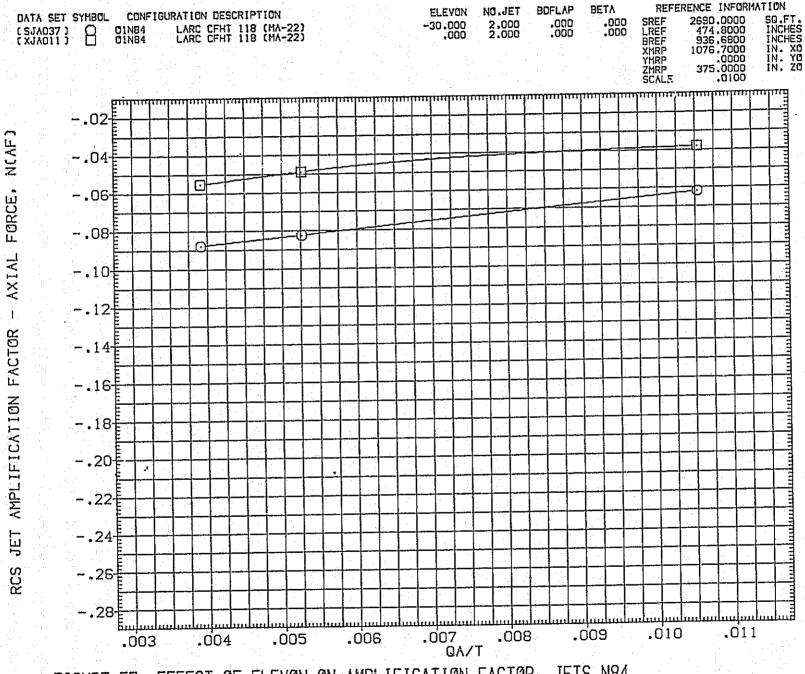


FIGURE 57. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N84
(E)ALPHA = 35.00

FIGURE 57. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N84

(A)ALPHA = -8.00

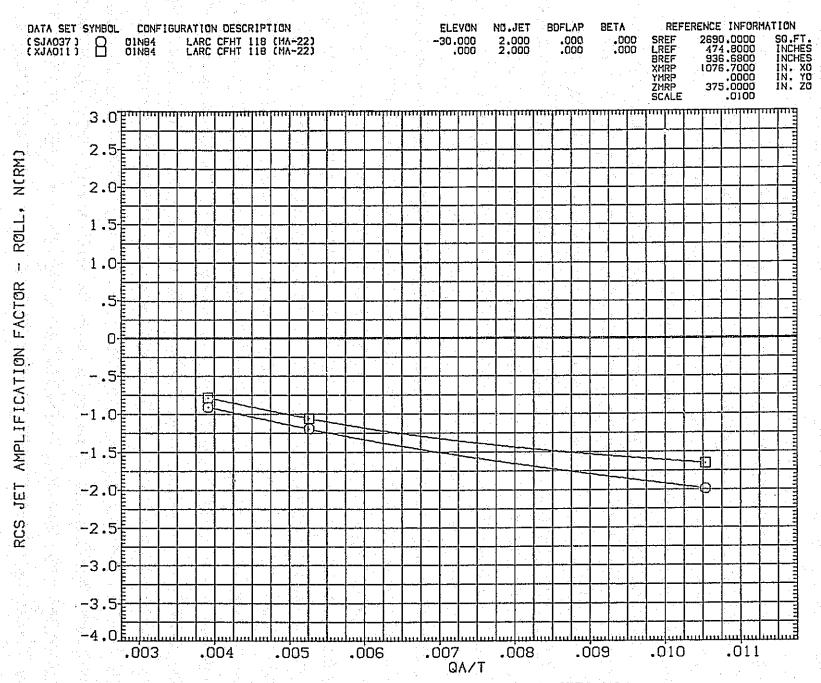


FIGURE 57. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N84
(B)ALPHA = .00

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JET

RCS

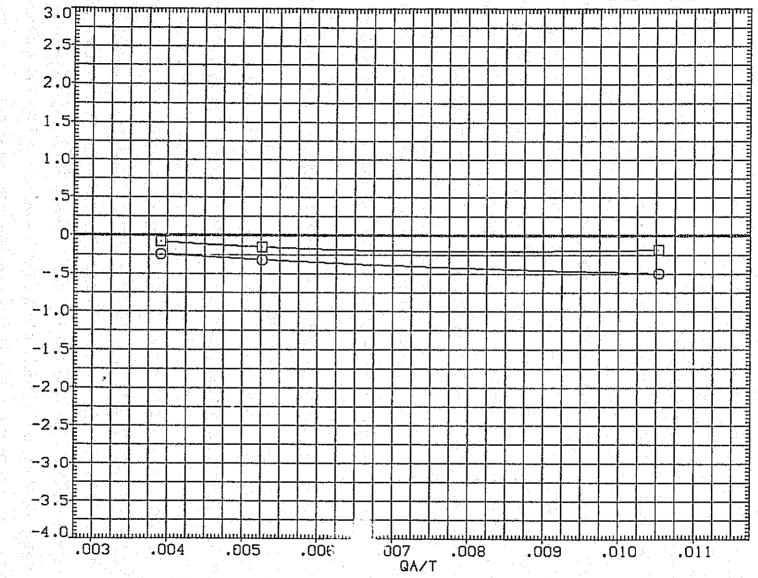


FIGURE 57. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N84

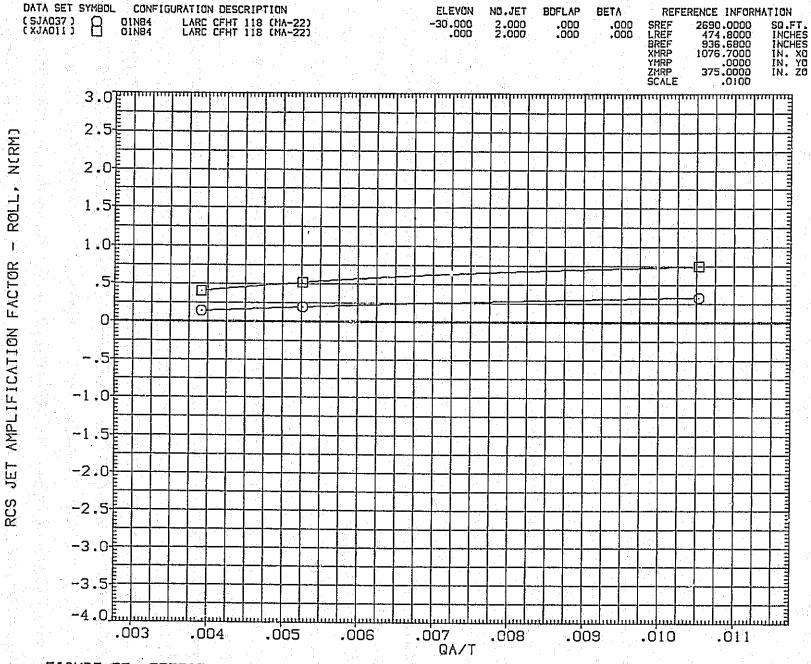
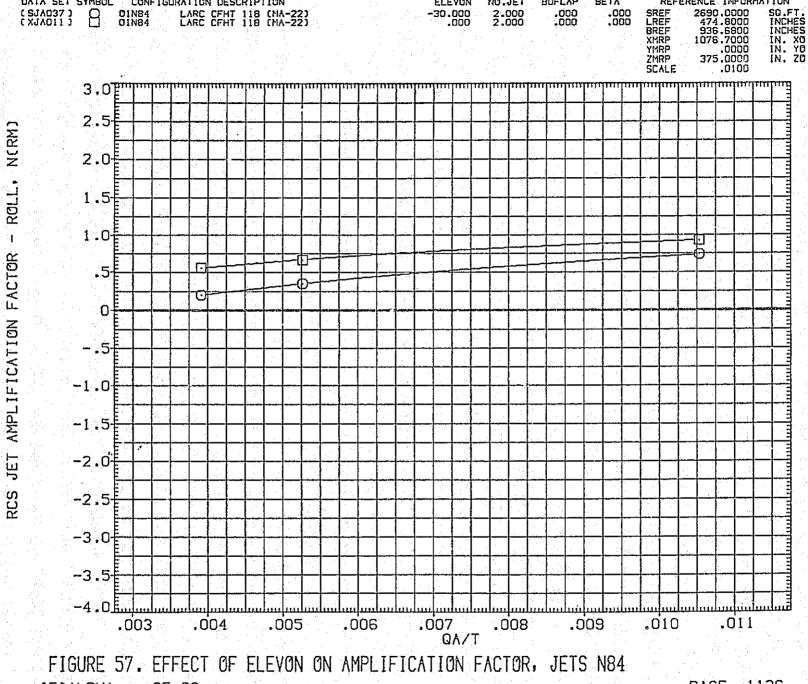


FIGURE 57. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N84



BDFLAP

NO.JET

ELEVON

BETA

REFERENCE INFORMATION

(E)ALPHA = 35.00

DATA SET SYMBOL | CONFIGURATION DESCRIPTION

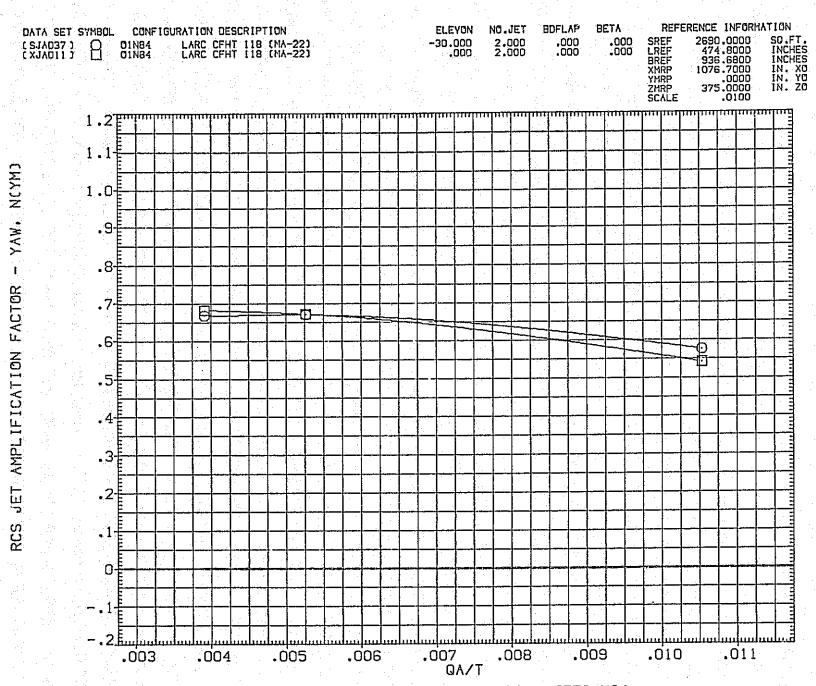


FIGURE 57. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N84

YAW, NCYMJ

AMPLIFICATION FACTOR

JET

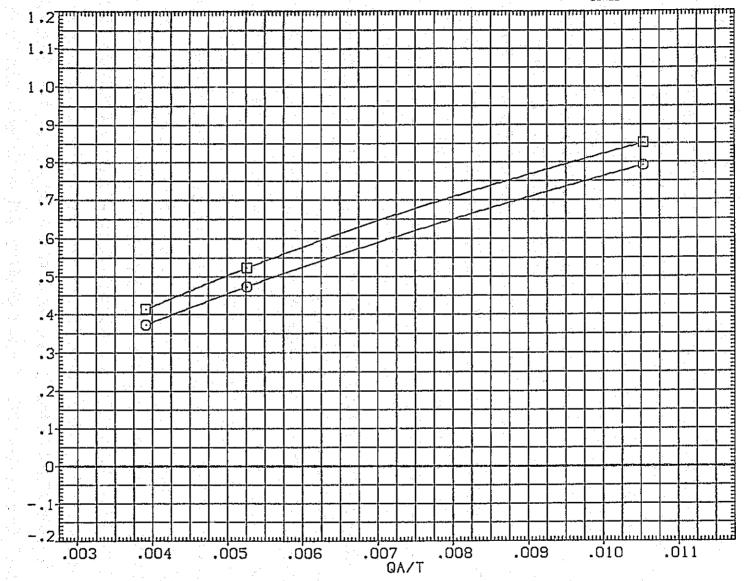


FIGURE 57. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N84
(B) ALPHA = .00

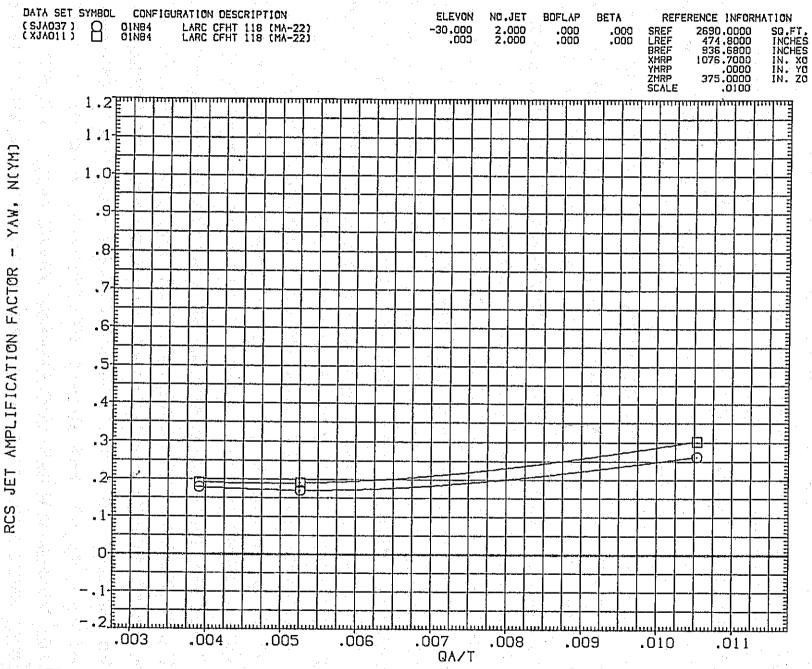


FIGURE 57. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N84

FIGURE 57. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N84 (D)ALPHA = 20.00

REFERENCE INFORMATION

BOFLAP

NO.JET

ELEVON.

DATA SET SYMBOL

CONFIGURATION DESCRIPTION

BETA

FIGURE 57. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N84

(E)ALPHA = 35.00

PAGE

N(SF)

AMPL IFICATION

RCS JET

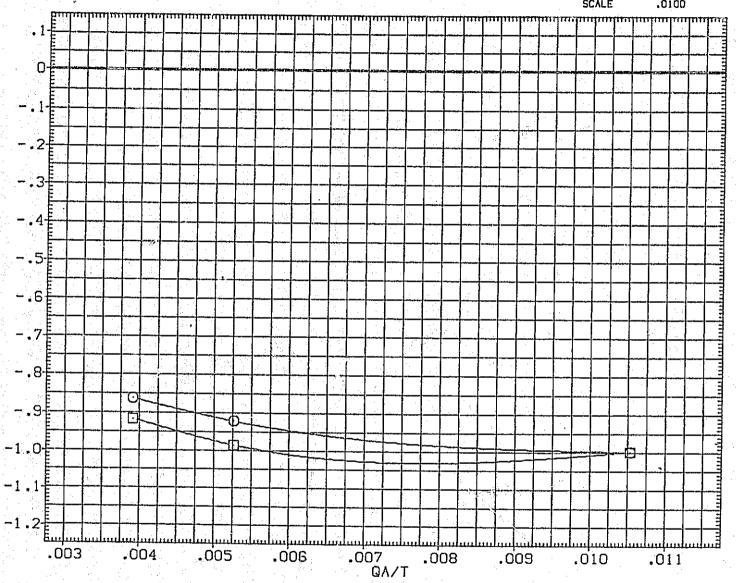


FIGURE 57. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N84

*PAGE 1132

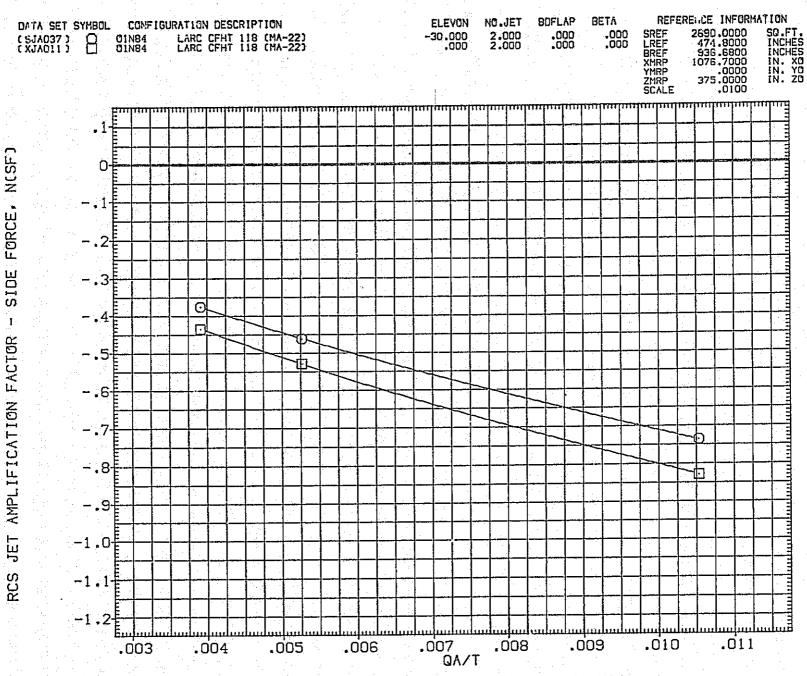


FIGURE 57. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N84

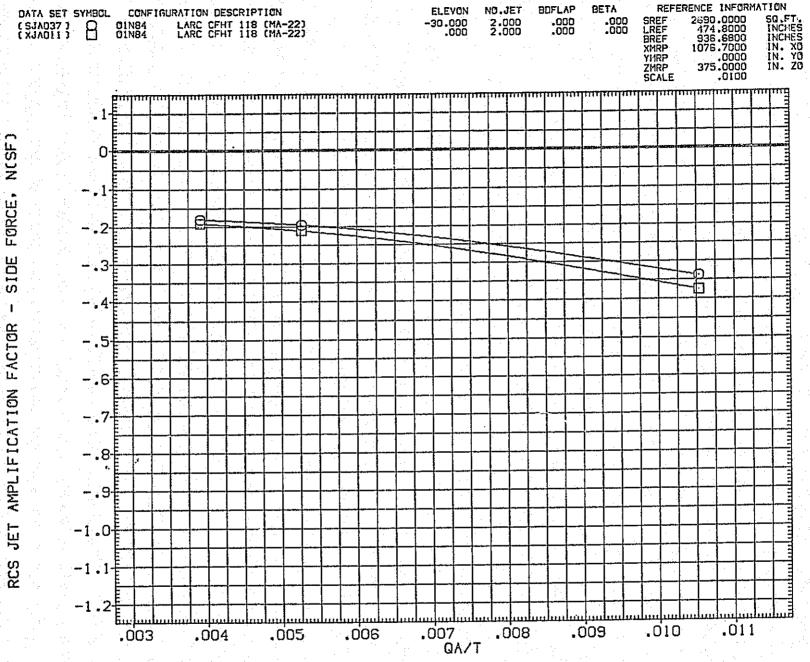


FIGURE 57. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N84 (C)ALPHA = 10.00

138.41

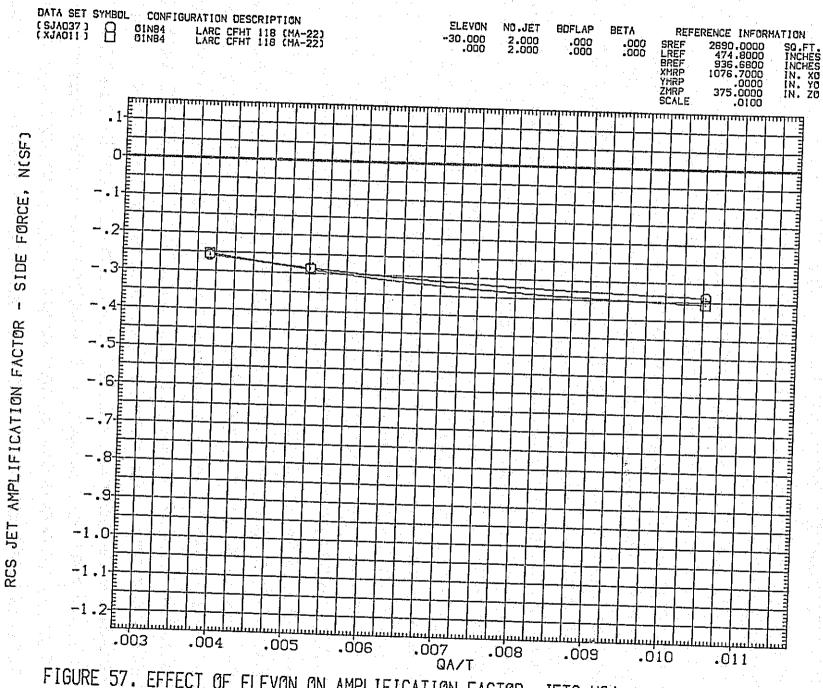


FIGURE 57. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N84 (D)ALPHA = 20.00

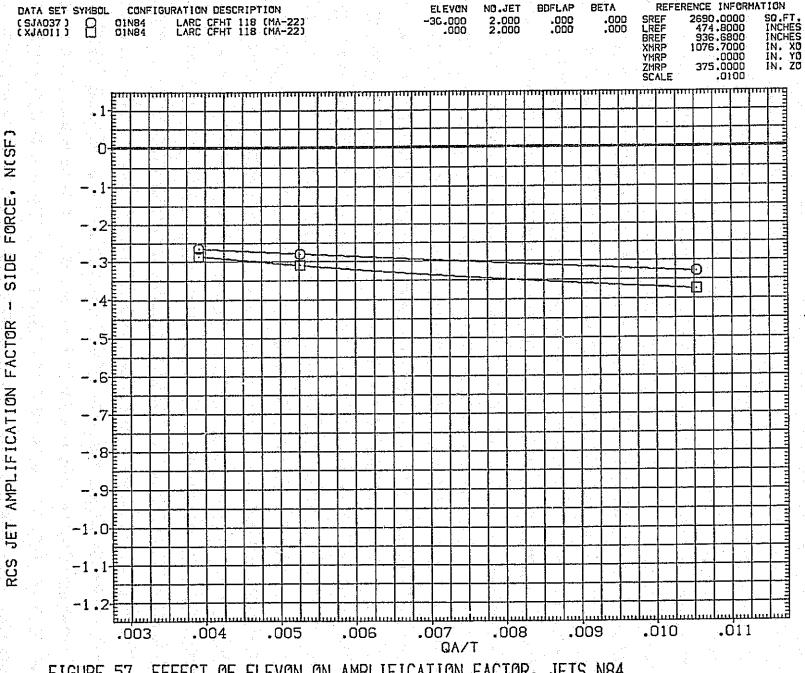


FIGURE 57. EFFECT OF ELEVON ON AMPLIFICATION FACTOR, JETS N84
(E)ALPHA = 35.00



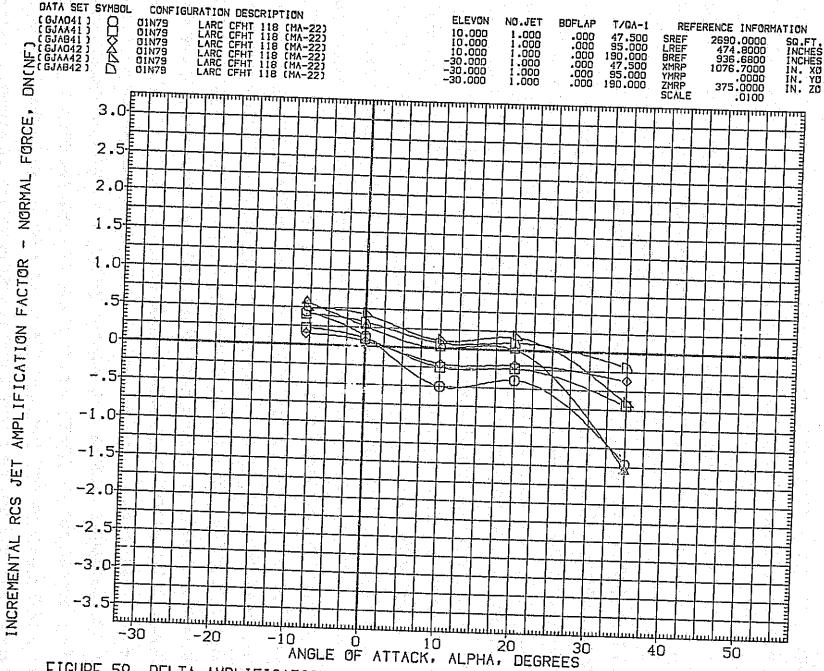


FIGURE 58. DELTA AMPLIFICATION FACTOR, ELEVON=10, AND -30, N79 JET

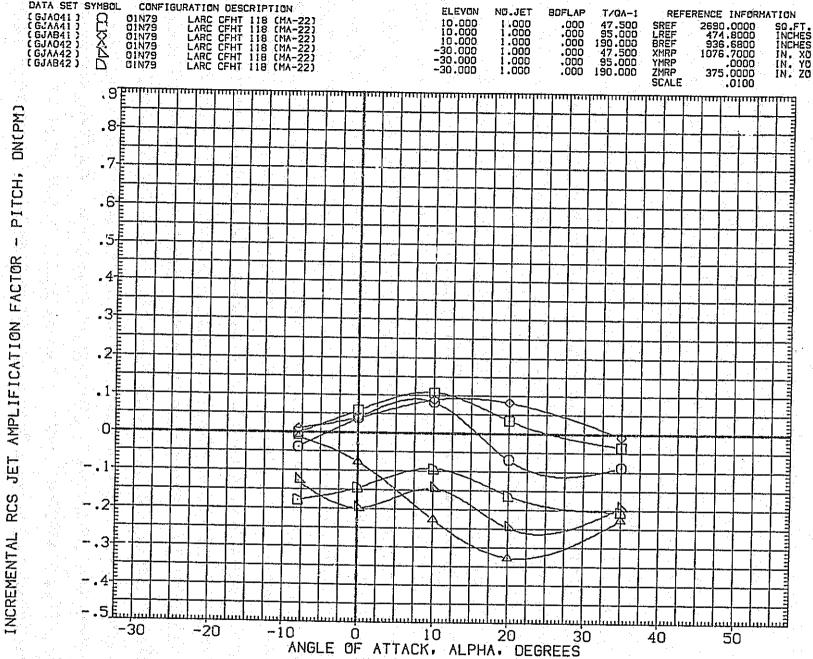
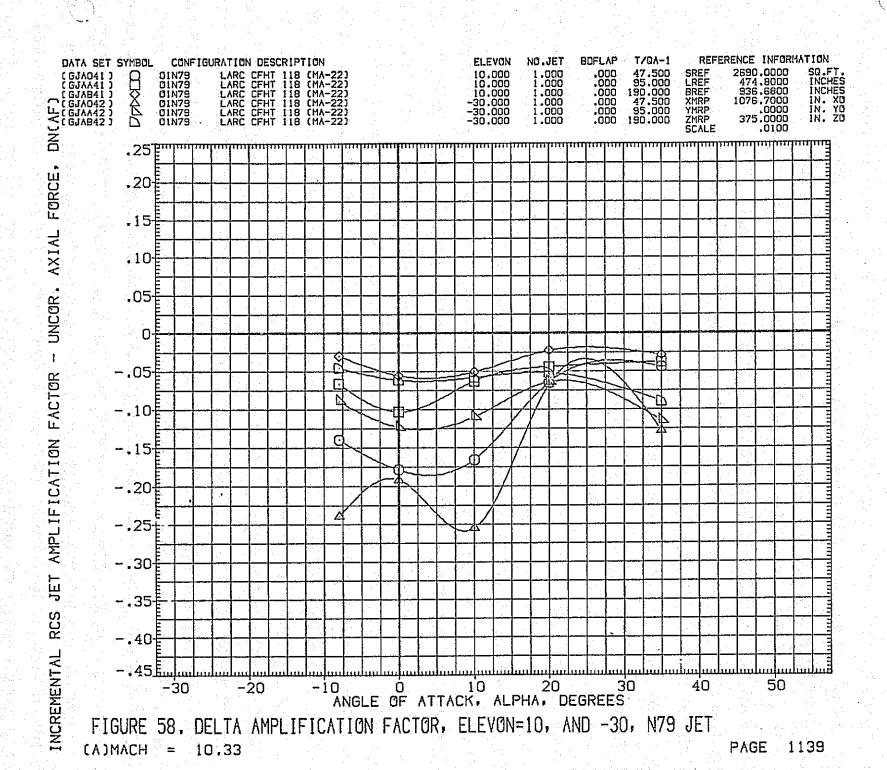


FIGURE 58. DELTA AMPLIFICATION FACTOR, ELEVON=10, AND -30, N79 JET CADMACH = 10.33



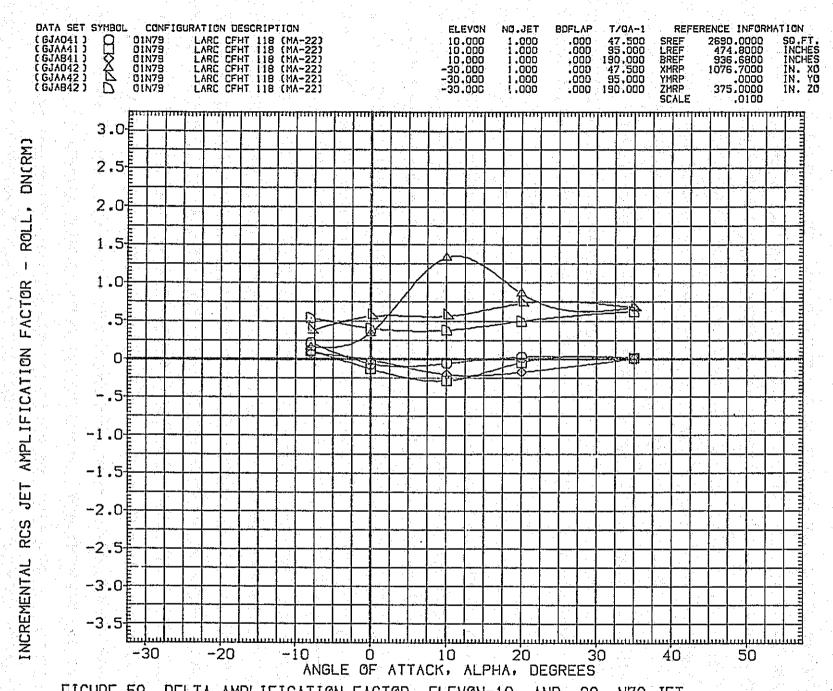


FIGURE 58. DELTA AMPLIFICATION FACTOR, ELEVON=10, AND -30, N79 JET

(A)MACH = 10.33

PAGE 1140

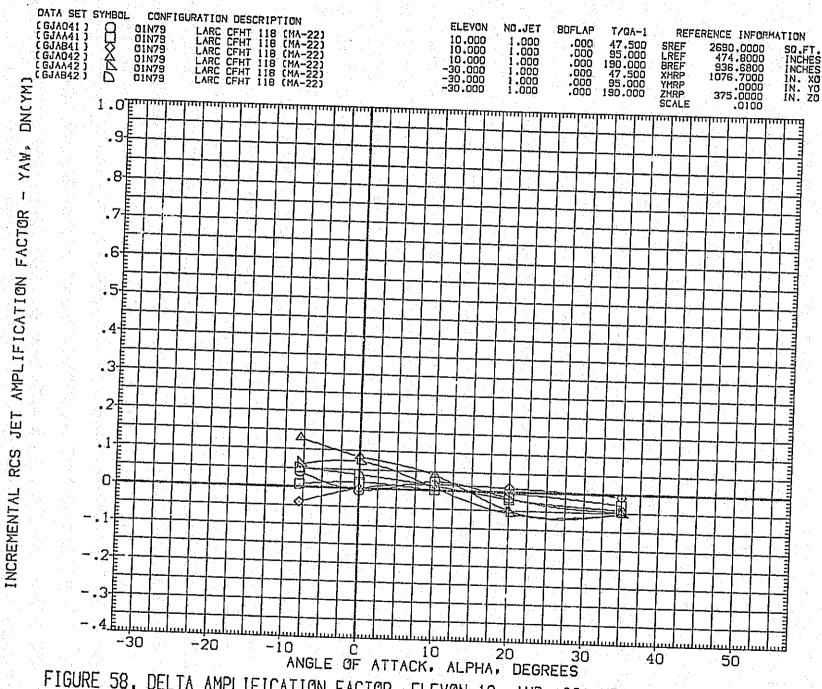


FIGURE 58. DELTA AMPLIFICATION FACTOR, ELEVON=10, AND -30, N79 JET

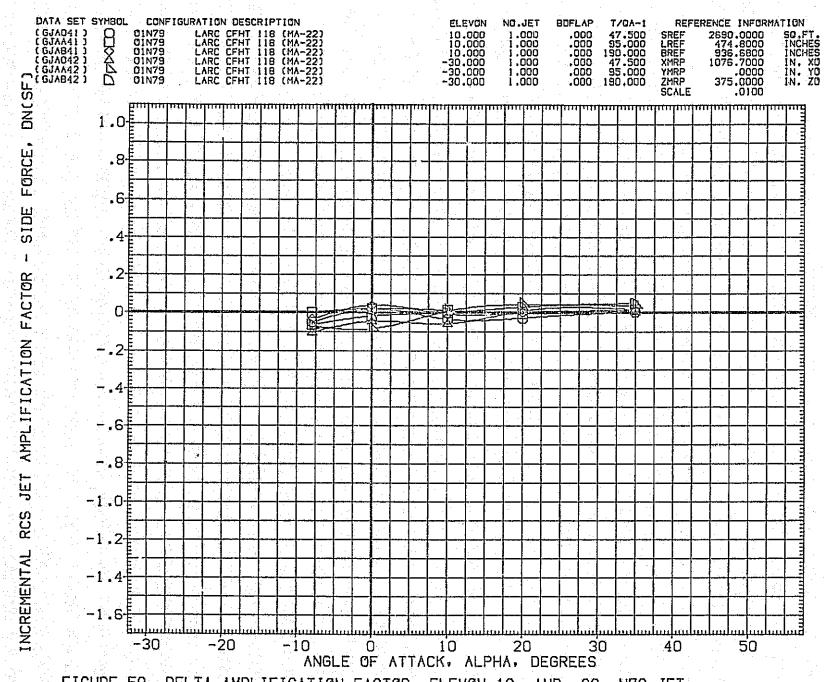


FIGURE 58. DELTA AMPLIFICATION FACTOR, ELEVON=10, AND -30, N79 JET

(A)MACH = 10.33

PAGE 1142

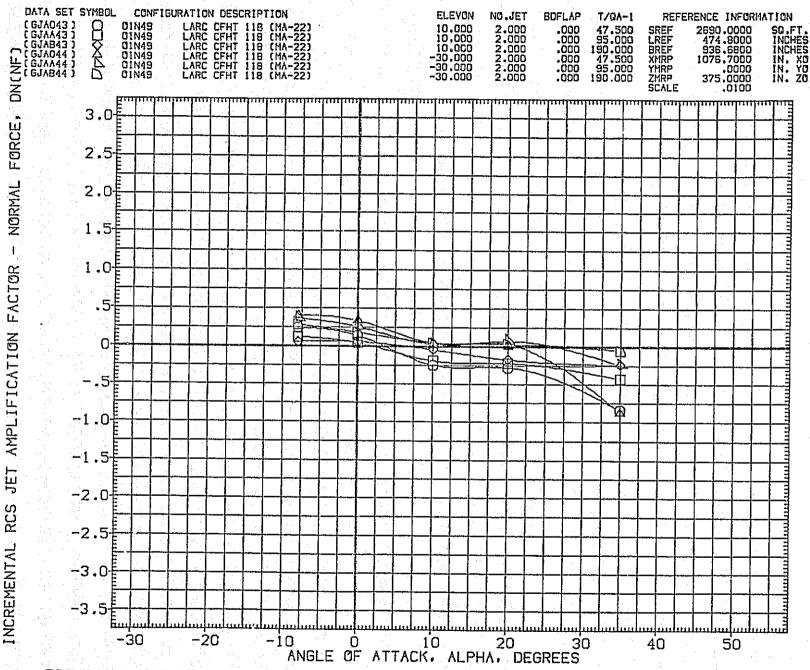


FIGURE 59. DELTA AMPLIFICATION FACTOR, ELEVON=10, AND -30, N49 JETS

(A)MACH = 10.33

PAGE

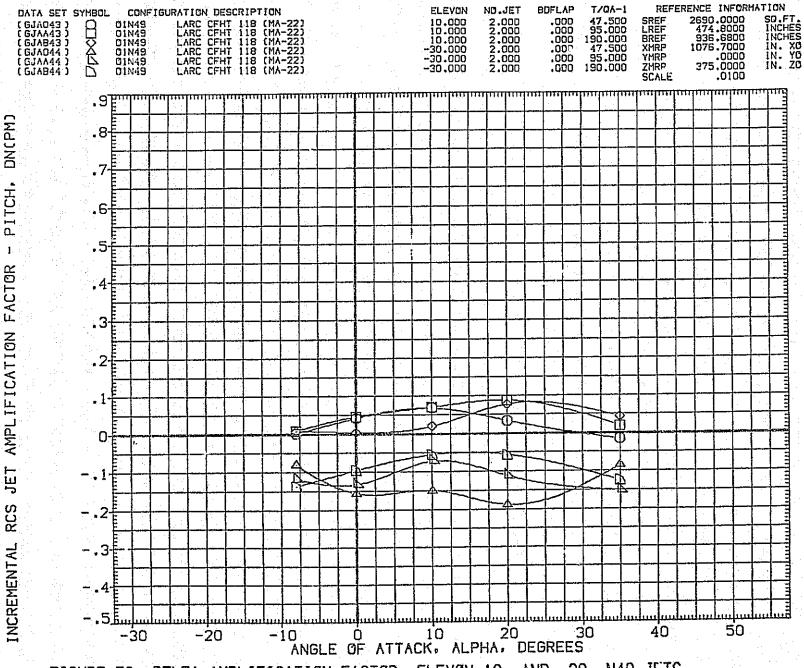


FIGURE 59. DELTA AMPLIFICATION FACTOR, ELEVON=10, AND -30, N49 JETS

(A)MACH = 10.33

PAGE 1144

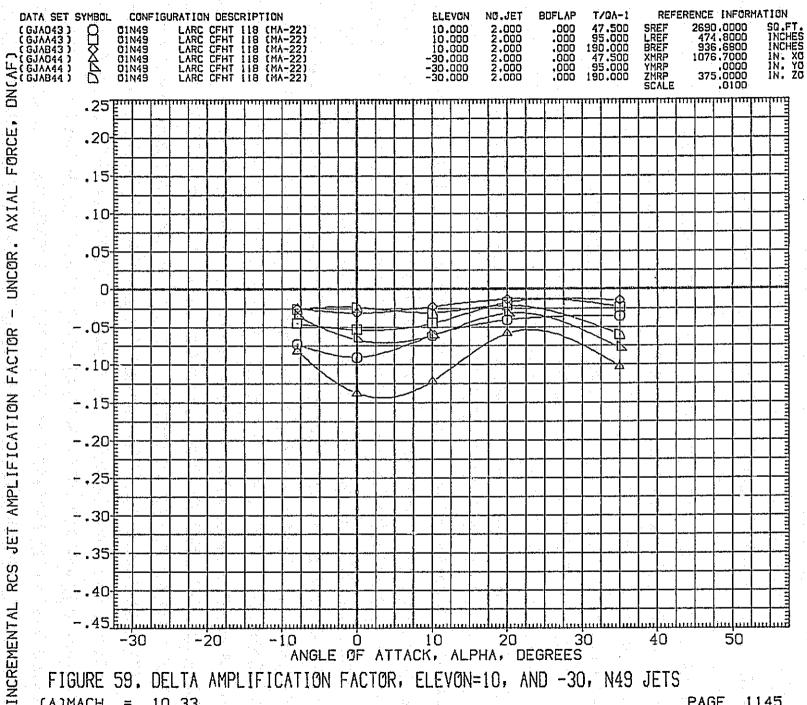


FIGURE 59. DELTA AMPLIFICATION FACTOR, ELEVON=10, AND -30, N49 JETS CADMACH = 10.33 PAGE

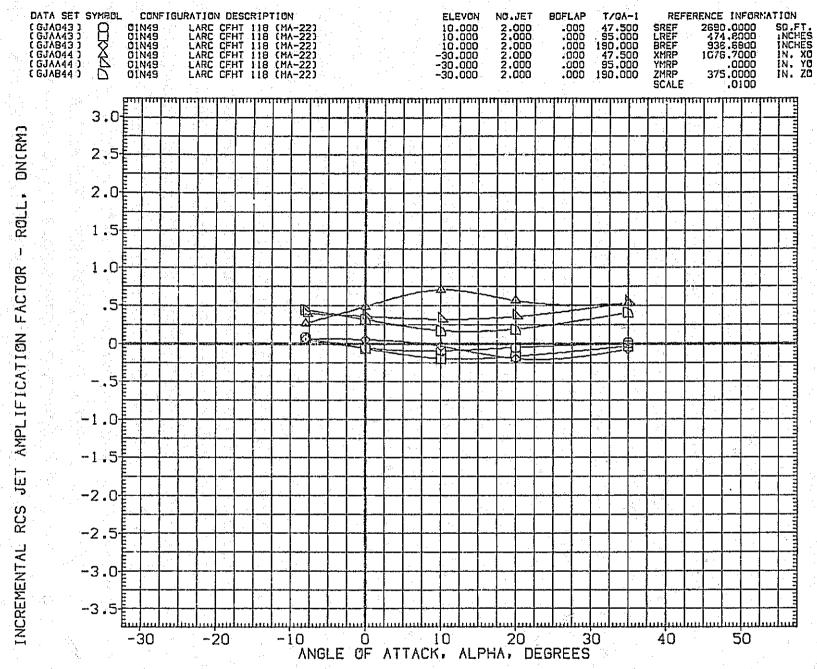


FIGURE 59. DELTA AMPLIFICATION FACTOR, ELEVON=10, AND -30, N49 JETS

(A)MACH = 10.33

PAGE 1146

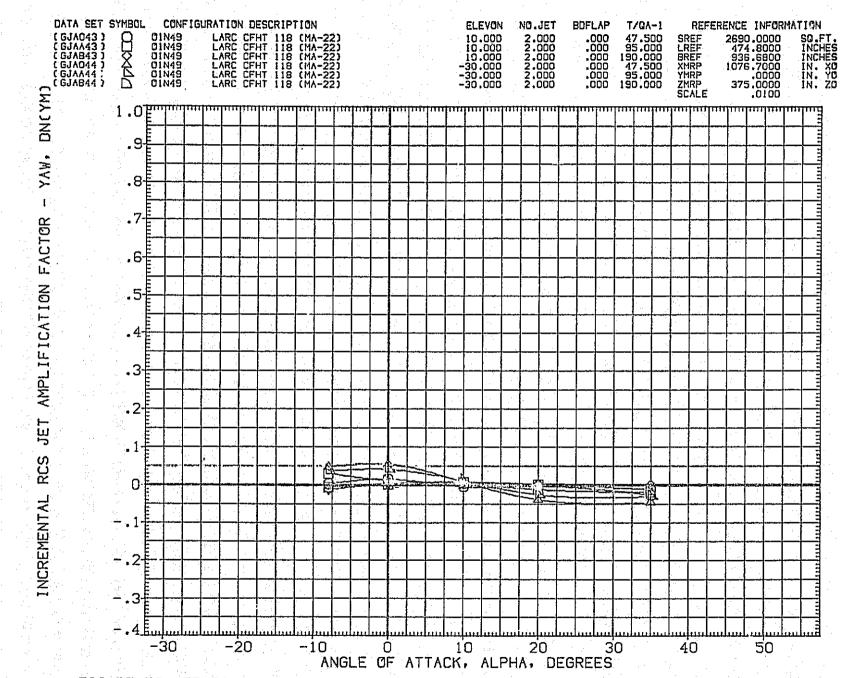


FIGURE 59. DELTA AMPLIFICATION FACTOR, ELEVON=10, AND -30, N49 JETS

(A)MACH = 10.33

PAGE

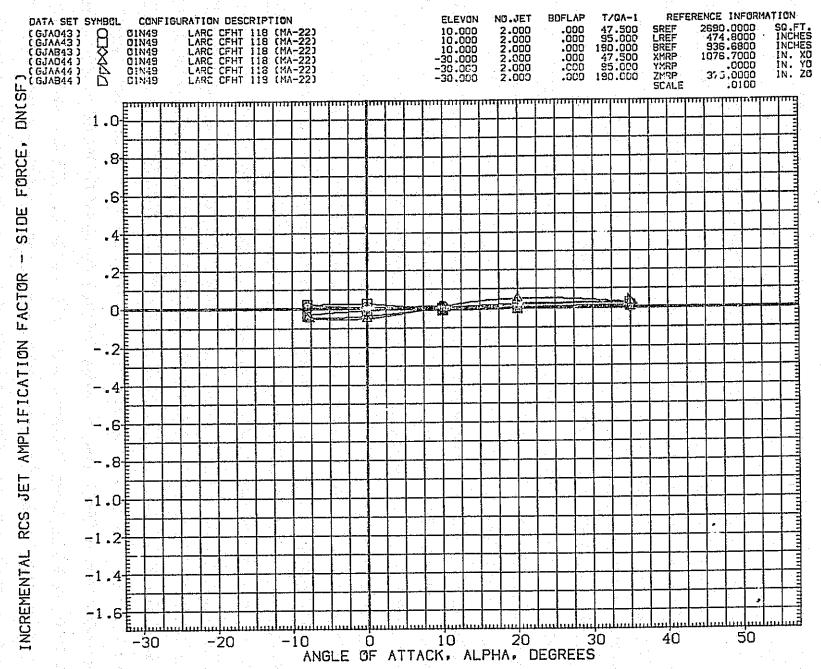


FIGURE 59. DELTA AMPLIFICATION FACTOR, ELEVON=10, AND -30, N49 JETS

EADMACH = 10.33

PAGE 1148

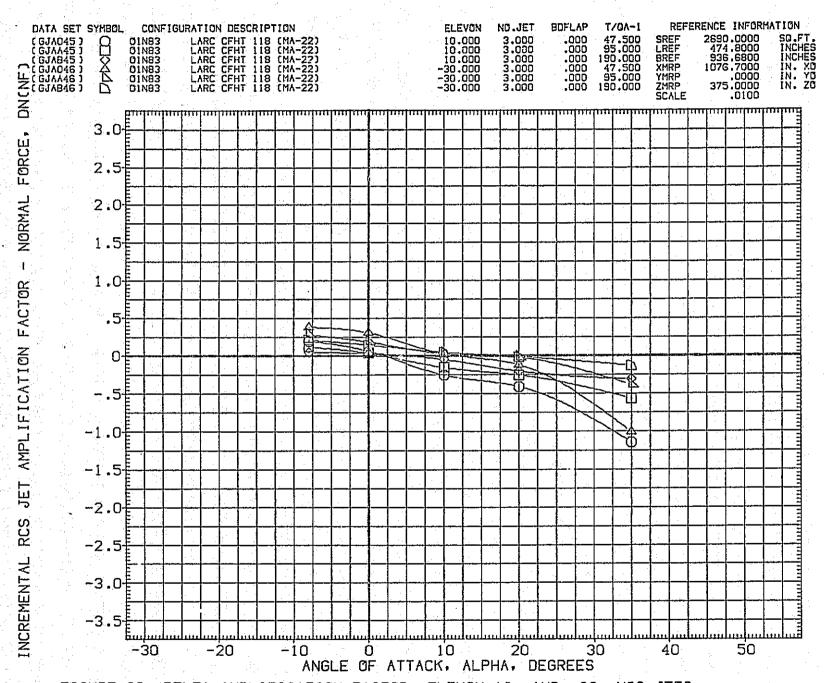


FIGURE 60. DELTA AMPLIFICATION FACTOR, ELEVON=10, AND -30, N83 JETS

(A)MACH = 10.33

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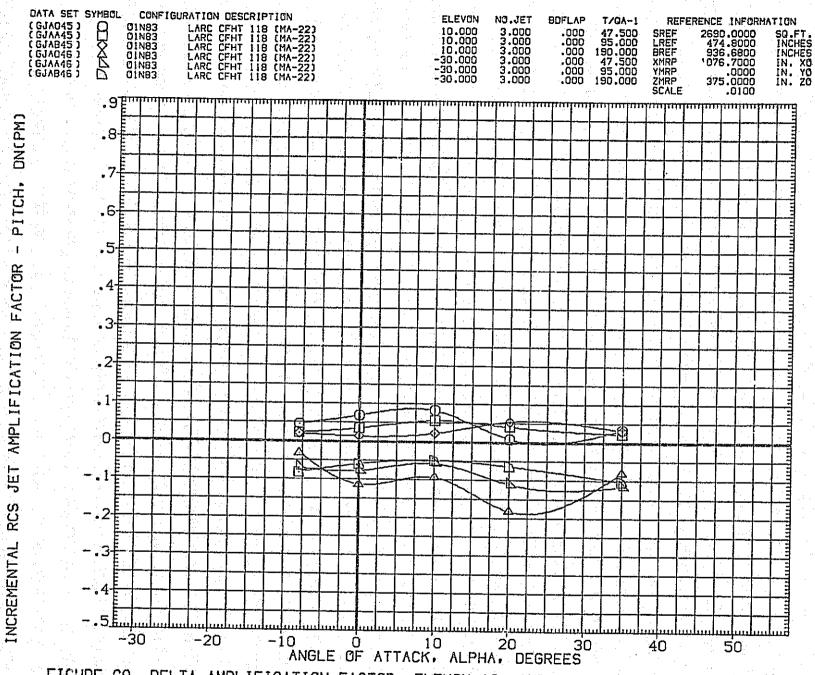
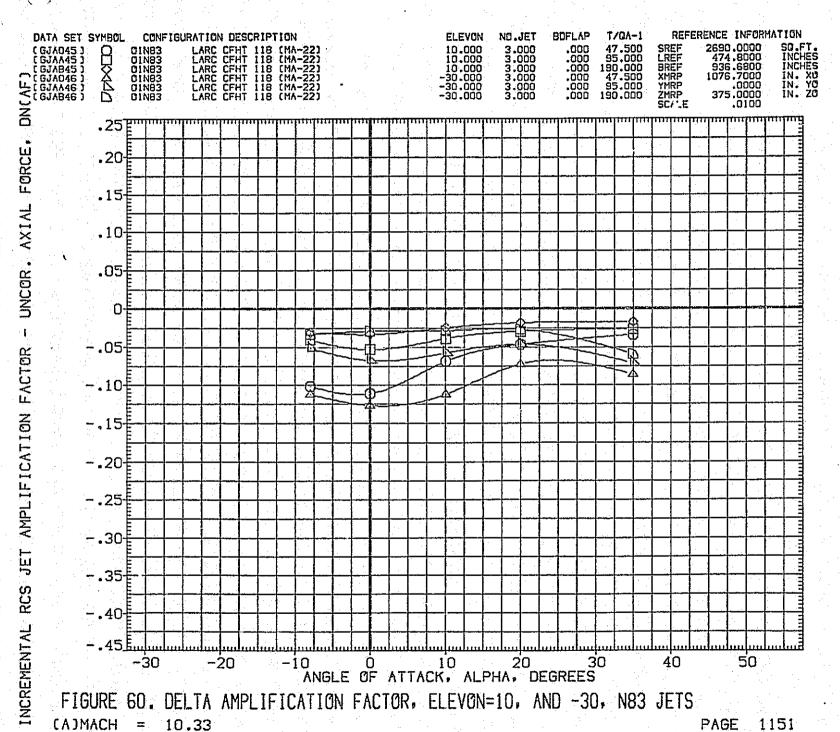


FIGURE 60. DELTA AMPLIFICATION FACTOR, ELEVON=10, AND -30, N83 JETS

[A]MACH = 10.33

PAGE 1150



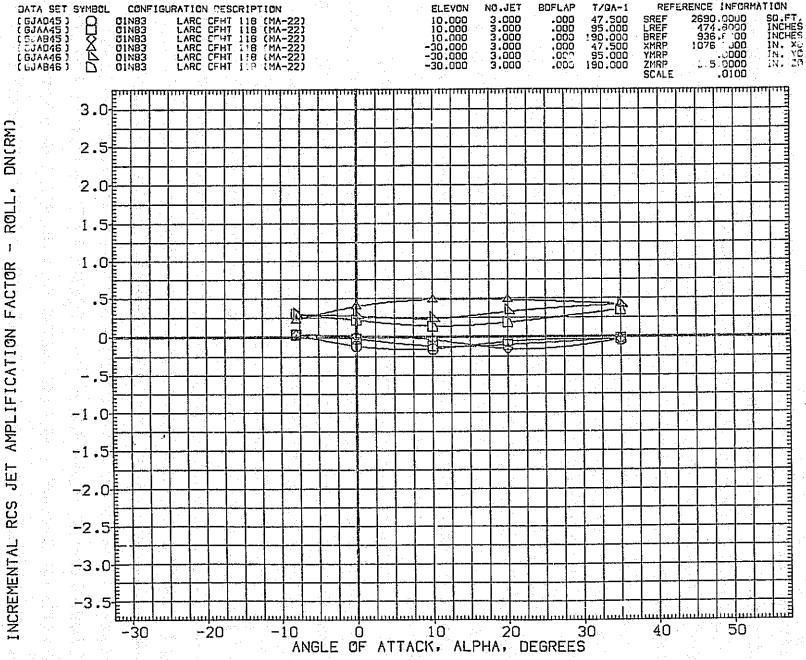


FIGURE 60. DELTA AMPLIFICATION FACTOR, ELEVON=10, AND -30, N83 JETS

(A)MACH = 10.33

PAGE 1152

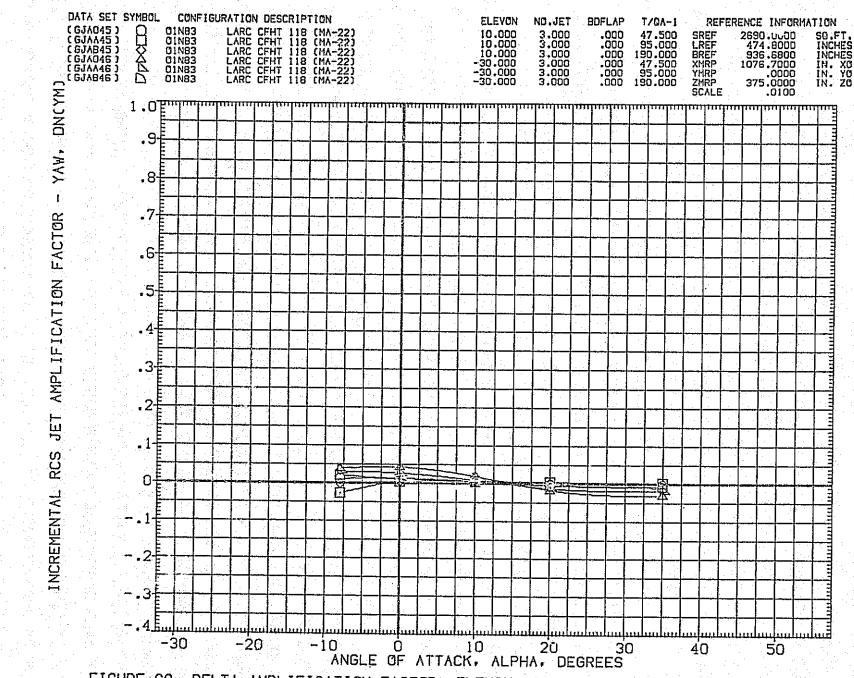


FIGURE 60. DELTA AMPLIFICATION FACTOR, ELEVON=10, AND -30, N83 JETS

[A]MACH = 10.33

PAGE 1153

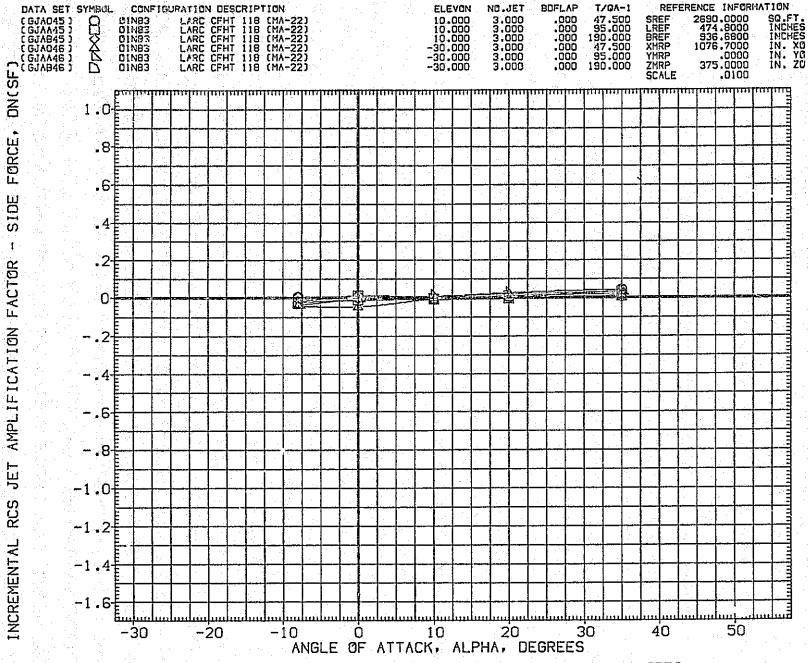


FIGURE 60. DELTA AMPLIFICATION FACTOR, ELEVON=10, AND -30, N83 JETS

[A]MACH = 10.33

PAGE 1154

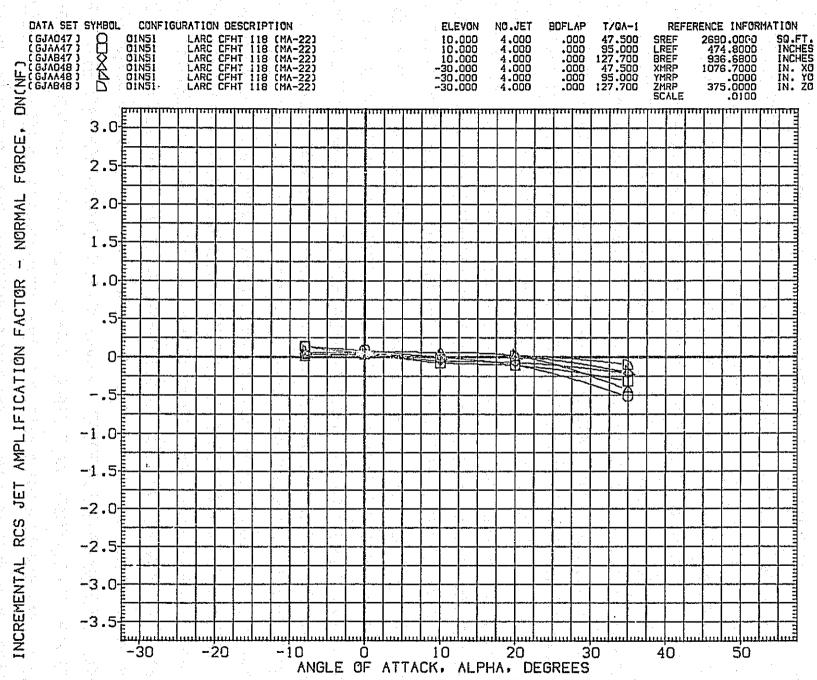


FIGURE 61. DELTA AMPLIFICATION FACTOR, ELEVON=10, AND -30, N51 JETS

(A)MACH = 10.33

PAGE

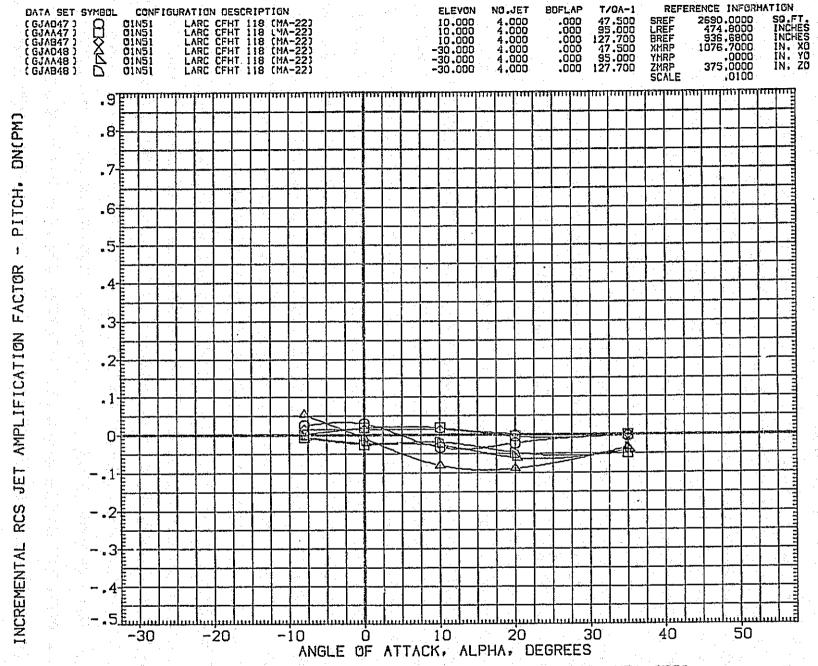


FIGURE 61. DELTA AMPLIFICATION FACTOR, ELEVON=10, AND -30, N51 JETS

(A)MACH = 10.33

PAGE 1156

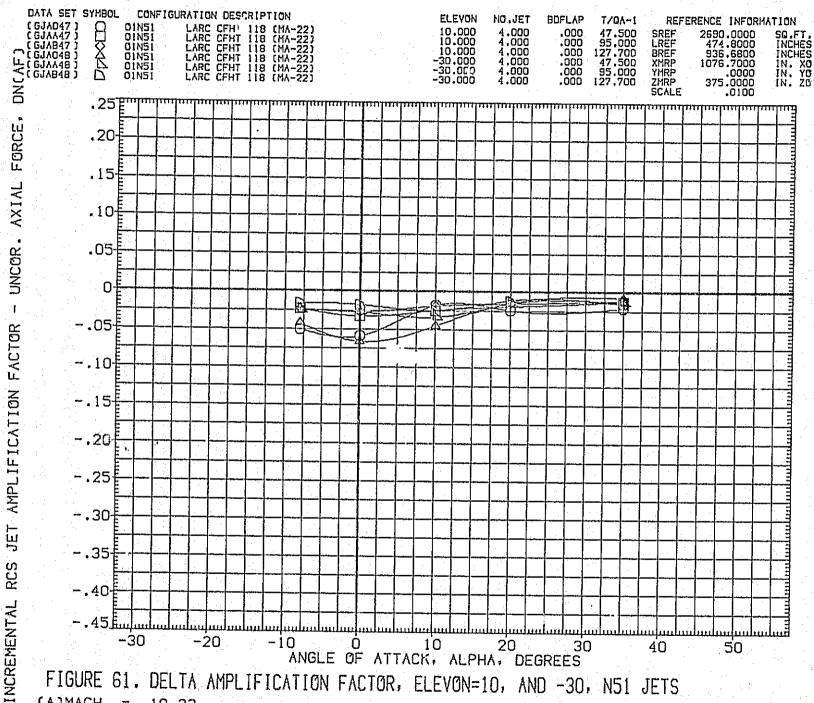


FIGURE 61. DELTA AMPLIFICATION FACTOR, ELEVON=10, AND -30, N51 JETS CAJMACH = 10.33PAGE 1157

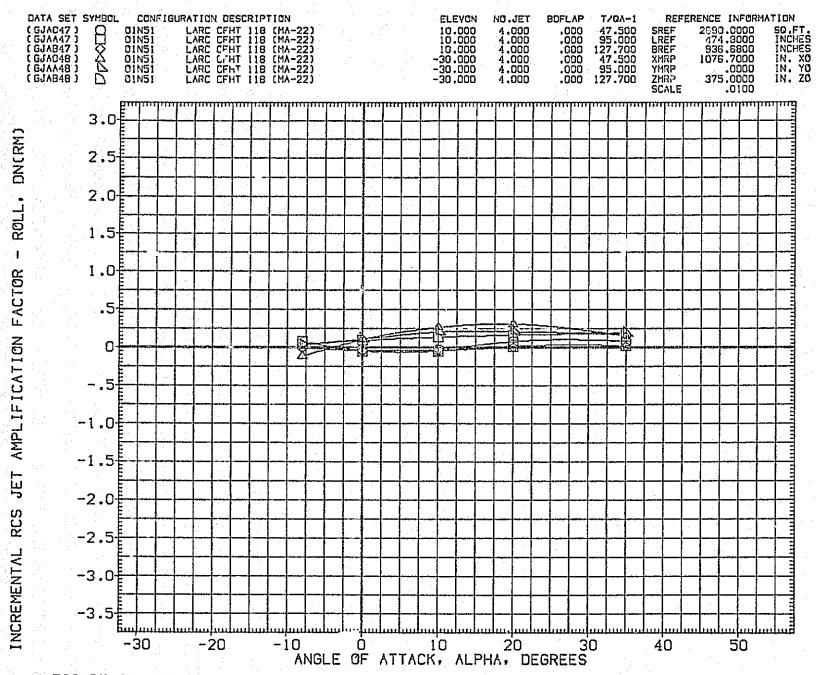


FIGURE 61. DELTA AMPLIFICATION FACTOR, ELEVON=10, AND -30, N51 JETS

(A)MACH = 10.33

PAGE 1158

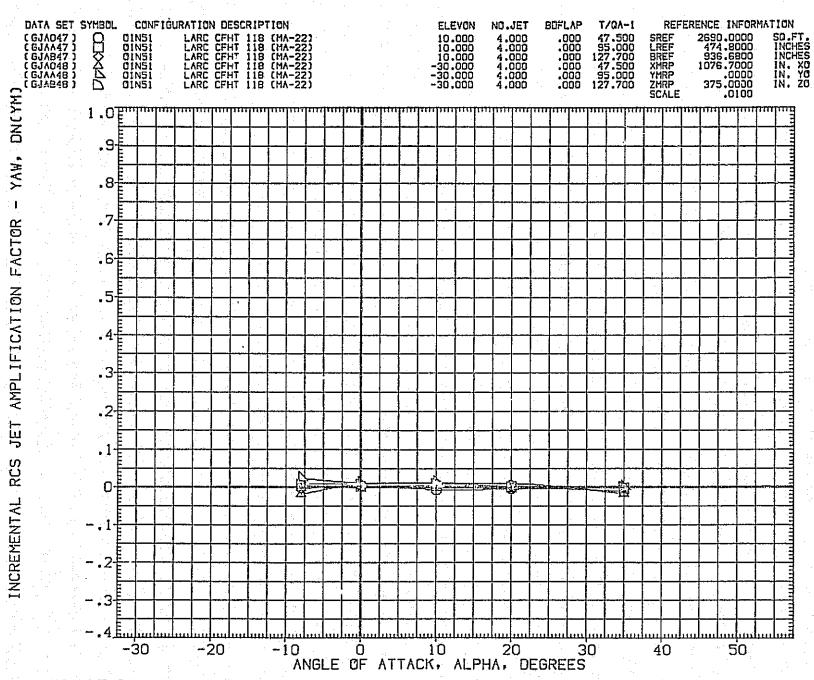


FIGURE 61. DELTA AMPLIFICATION FACTOR, ELEVON=10, AND -30, N51 JETS

[A]MACH = 10.33

PAGE 1159

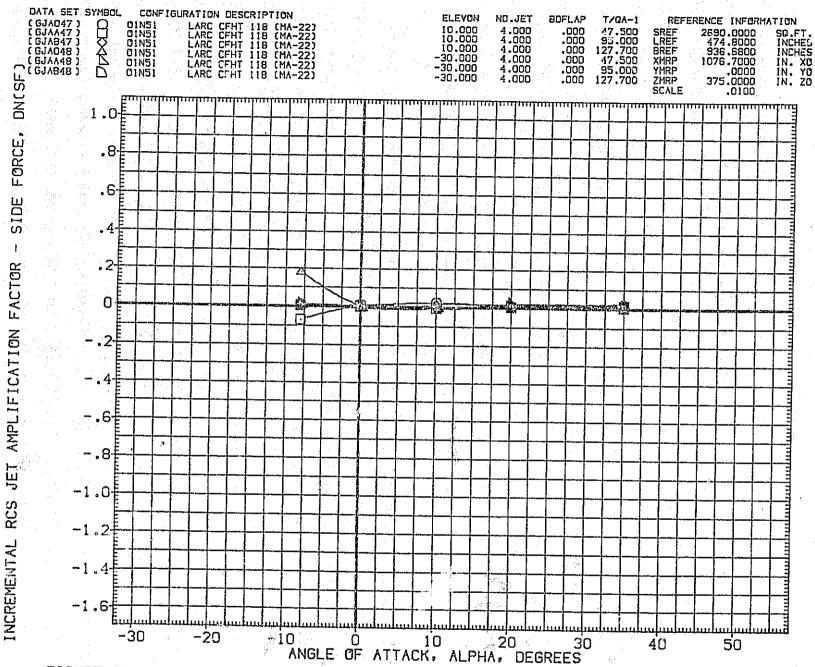


FIGURE 61. DELTA AMPLIFICATION FACTOR, ELEVON=10, AND -30, N51 JETS

[A]MACH = 10.33

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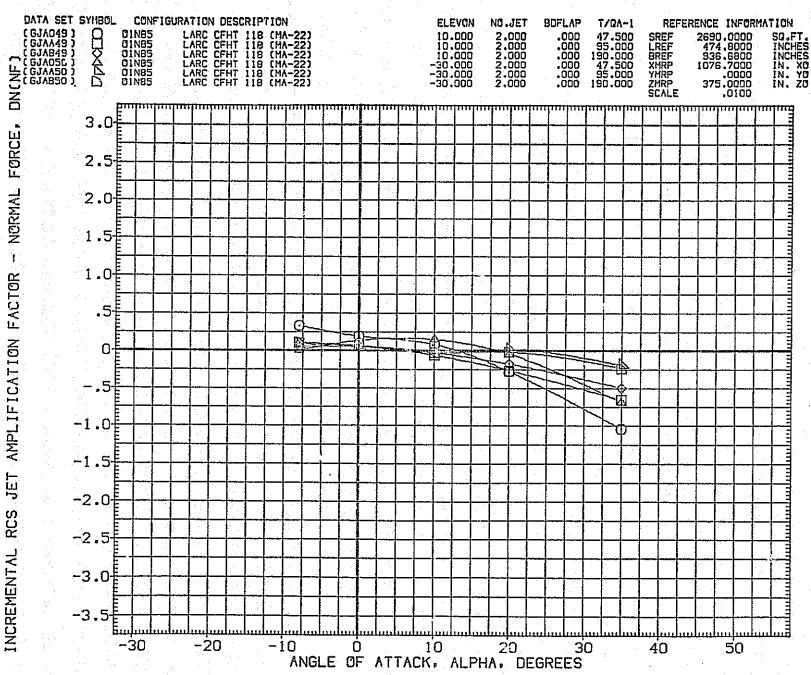


FIGURE 62. DELTA AMPLIFICATION FACTOR, ELEVON=10, AND -30, N85 JETS

(A)MACH = 10.33

PAGE

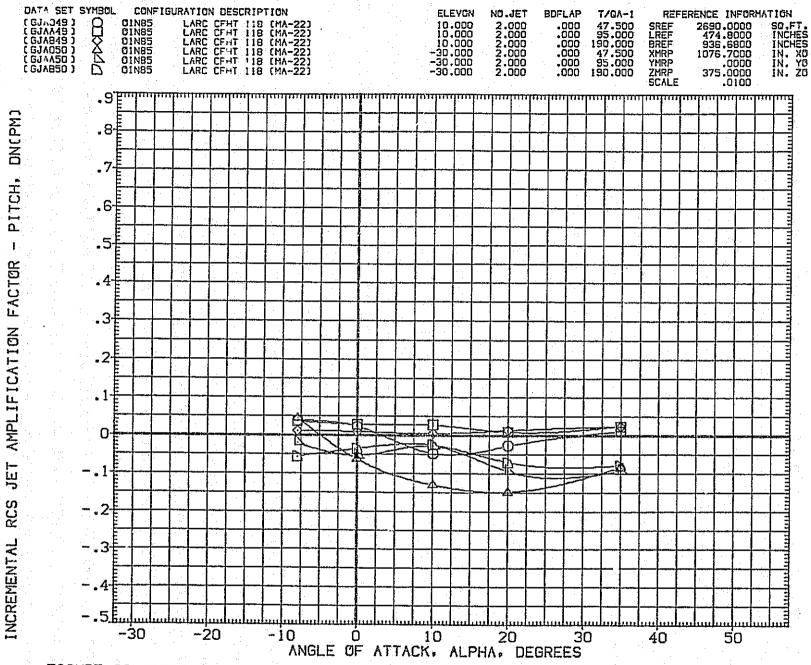
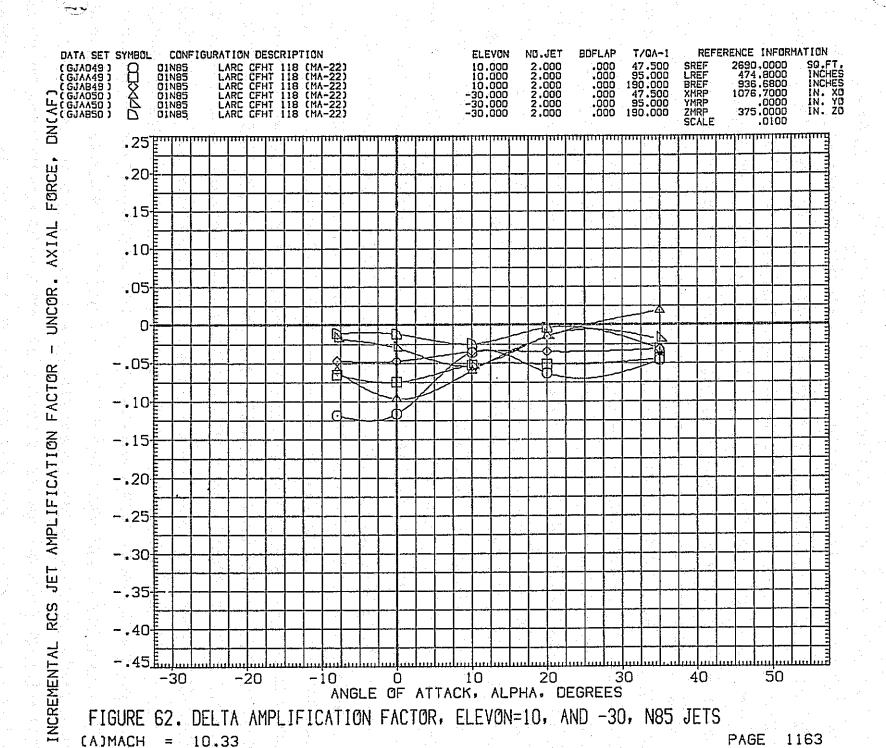


FIGURE 62. DELTA AMPLIFICATION FACTOR, ELEVON=10, AND -30, N85 JETS

[A)MACH = 10.33

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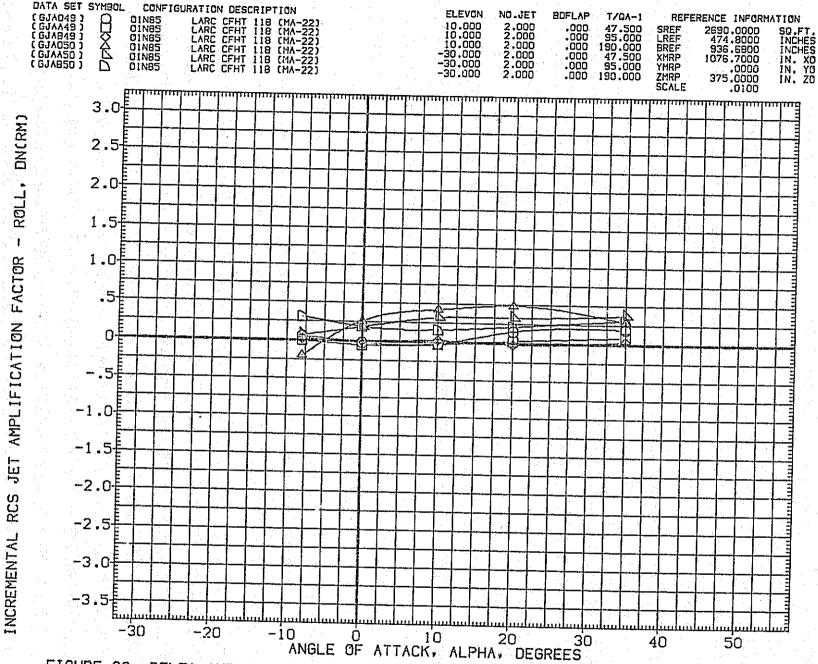


FIGURE 62. DELTA AMPLIFICATION FACTOR, ELEVON=10, AND -30, N85 JETS

CADMACH = 10.33

PAGE

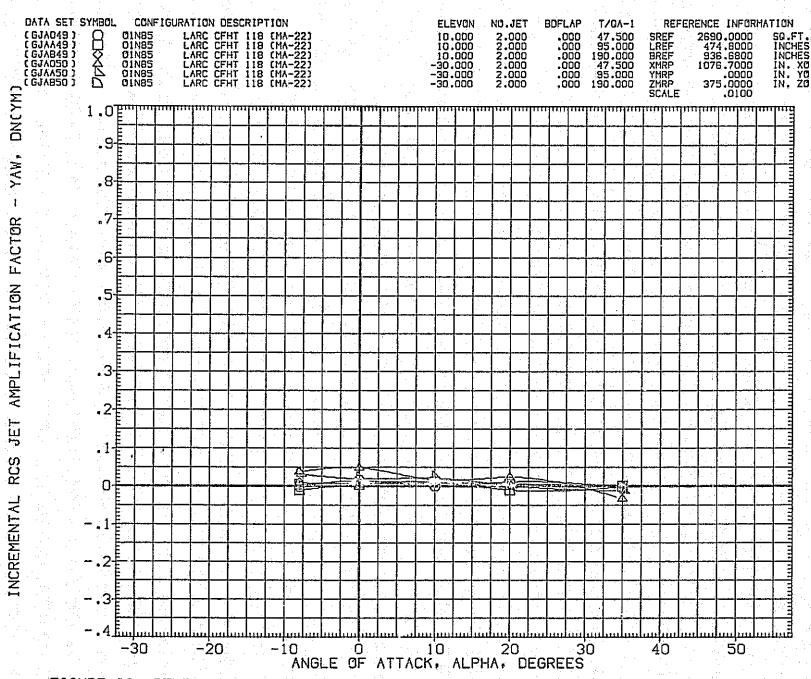


FIGURE 62. DELTA AMPLIFICATION FACTOR, ELEVON=10, AND -30, N85 JETS

[A]MACH = 10.33

PAGE 1165

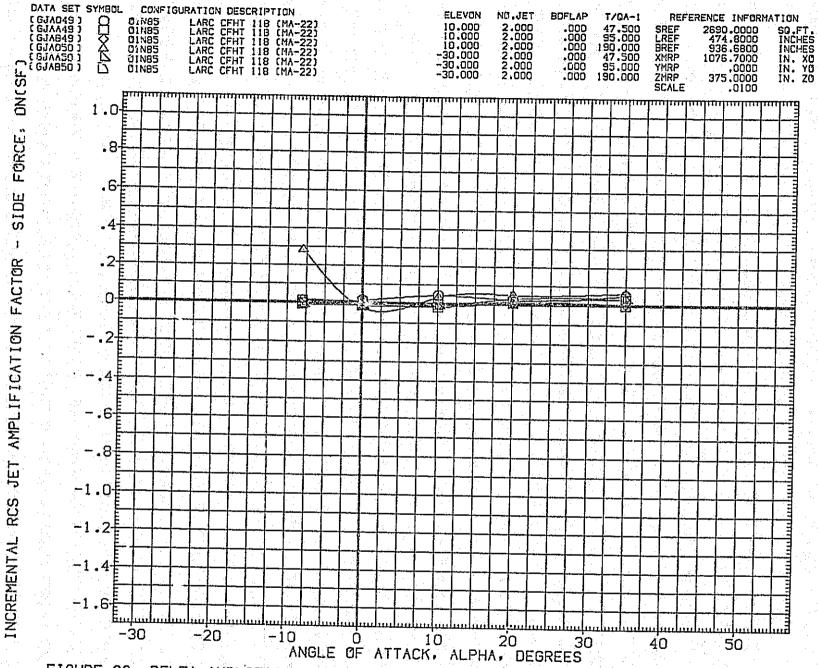


FIGURE 62. DELTA AMPLIFICATION FACTOR, ELEVON=10, AND -30, N85 JETS (A)MACH = 10.33 PAGE

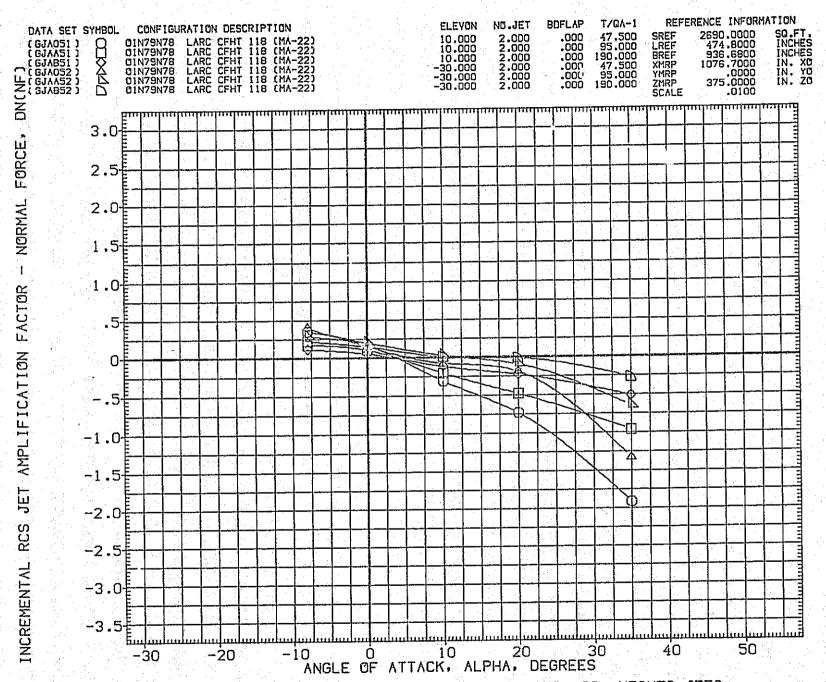


FIGURE 63. DELTA AMPLIFICATION FACTOR, ELEVON=10, AND -30, N79N78 JETS

PAGE 1167

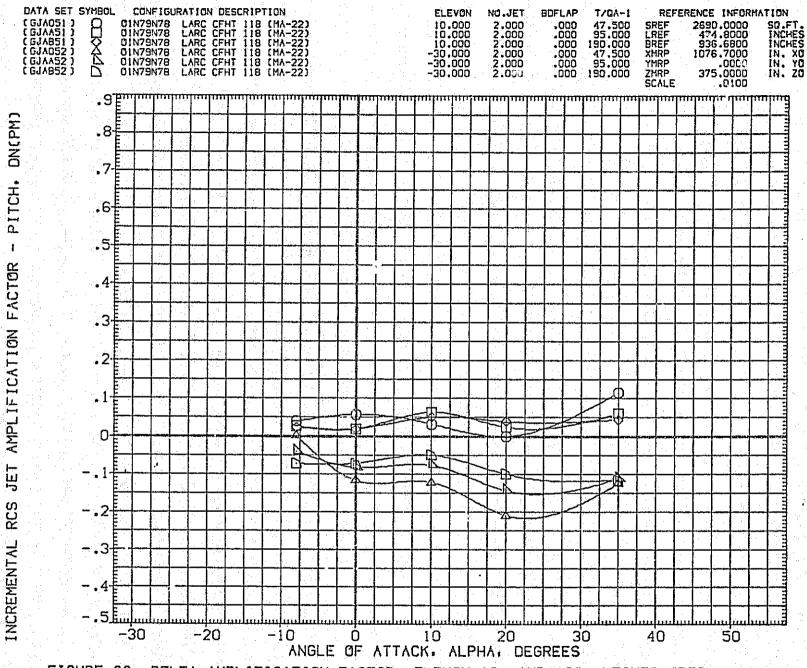


FIGURE 63. DELTA AMPLIFICATION FACTOR, ELEVON=10, AND -30, N79N78 JETS

[A]MACH = 10.33

PAGE 1168

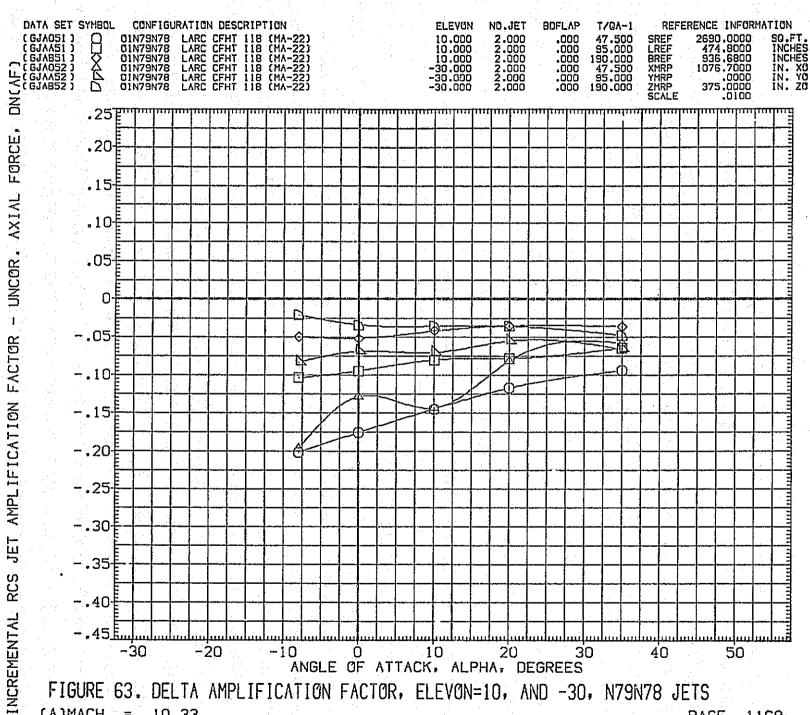


FIGURE 63. DELTA AMPLIFICATION FACTOR, ELEVON=10, AND -30, N79N78 JETS (A)MACH = 10.33PAGE

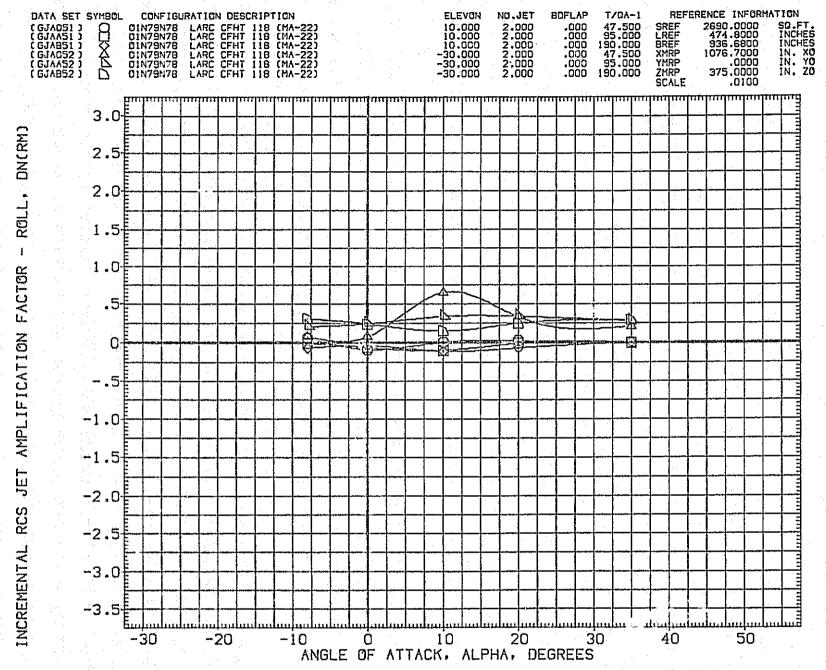
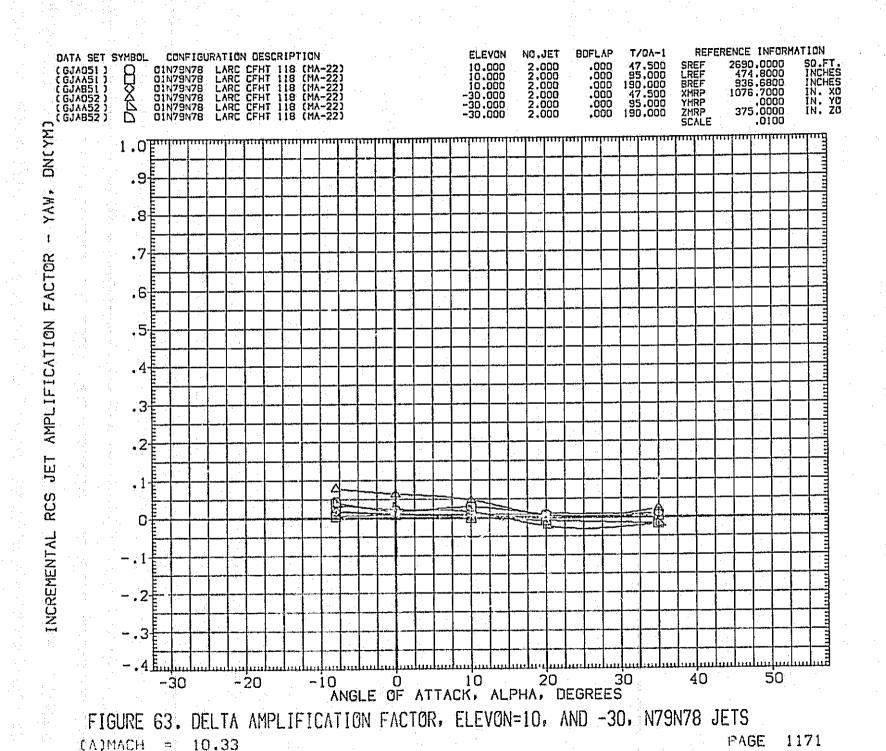


FIGURE 63. DELTA AMPLIFICATION FACTOR, ELEVON=10, AND -30, N. 9N78 JETS

(A)MACH = 10.33

PAGE 1170



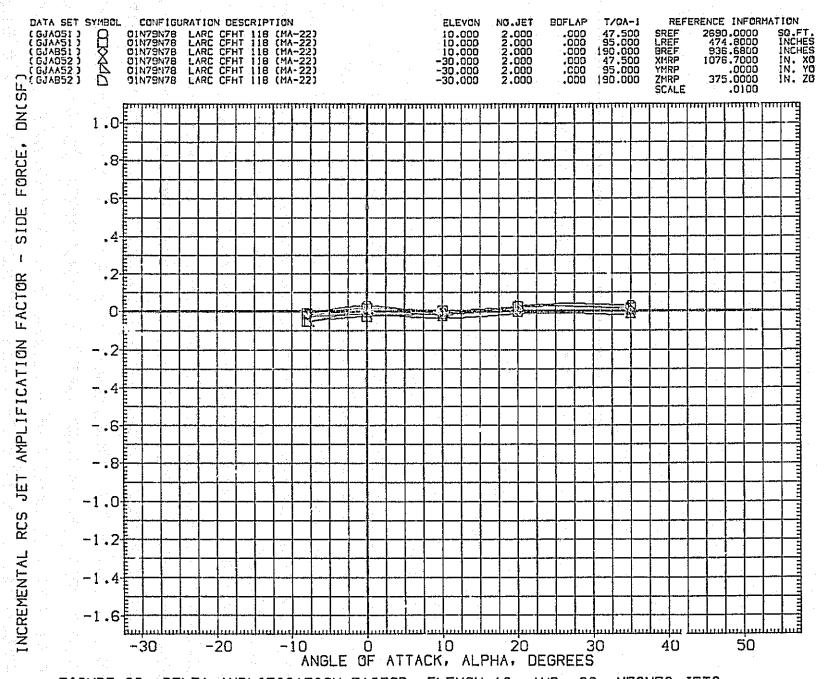


FIGURE 63. DELTA AMPLIFICATION FACTOR, ELEVON=10, AND -30, N79N78 JETS

(A)MACH = 10.33

PAGE 1172

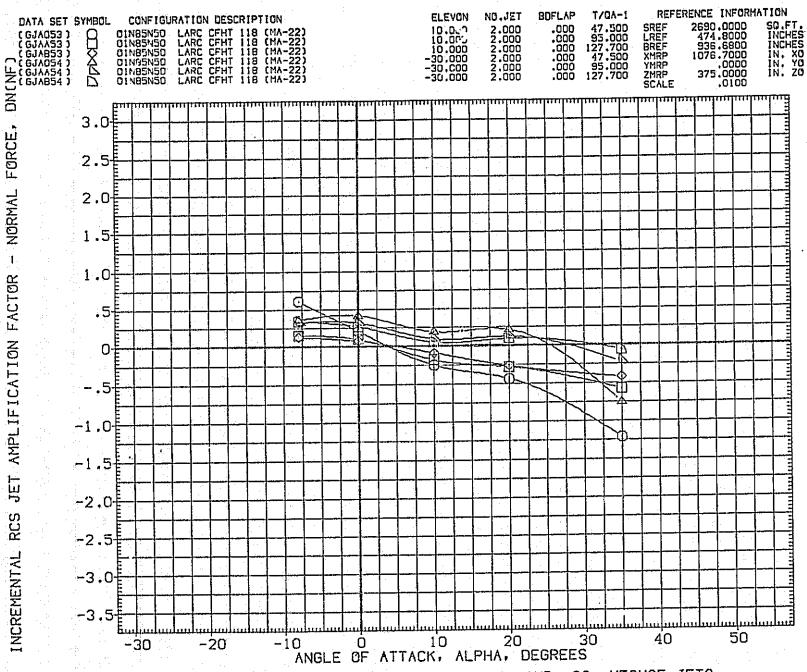


FIGURE 64. DELTA AMPLIFICATION FACTOR, ELEVON=10, AND -30, N50N85 JETS

PAGE 1173

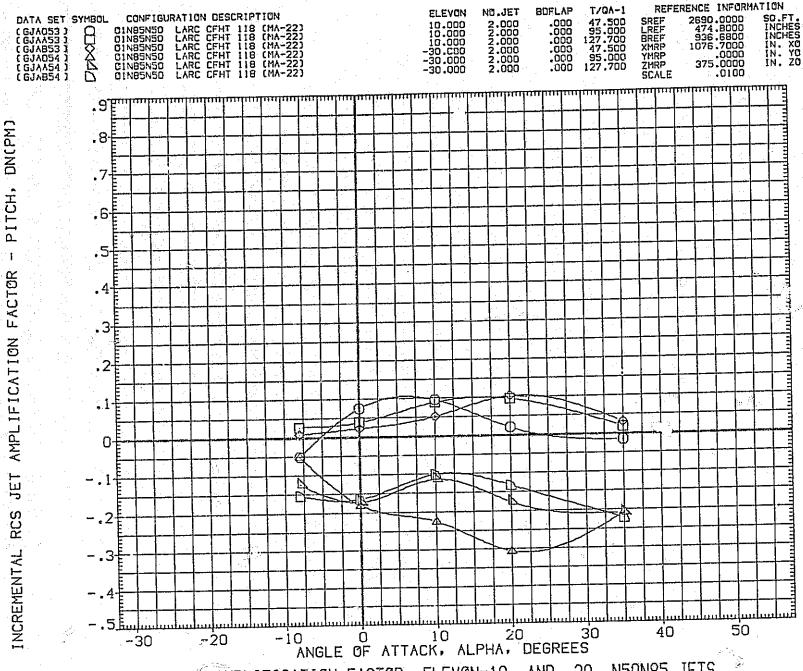
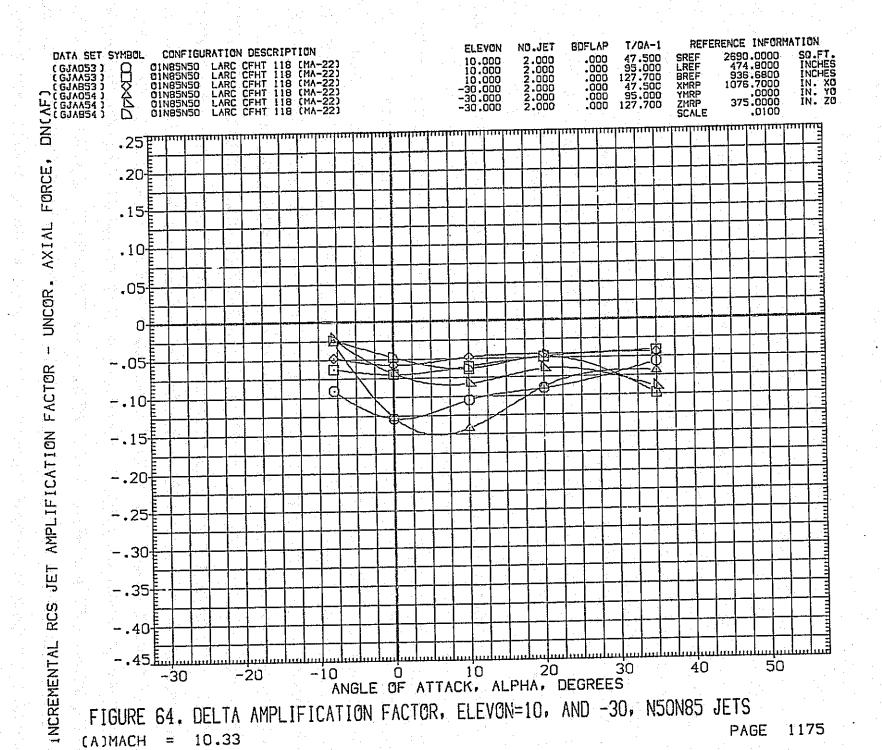


FIGURE 64. DELTA AMPLIFICATION FACTOR, ELEVON=10, AND -30, N50N85 JETS

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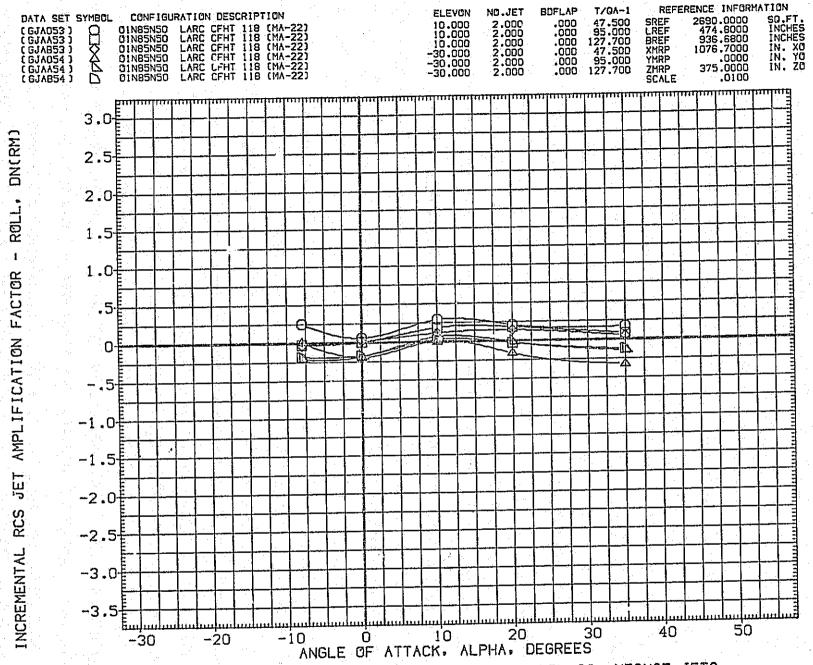


FIGURE 64. DELTA AMPLIFICATION FACTOR, ELEVON=10, AND -30, N50N85 JETS

[A)MACH = 10.33

PAGE 1176

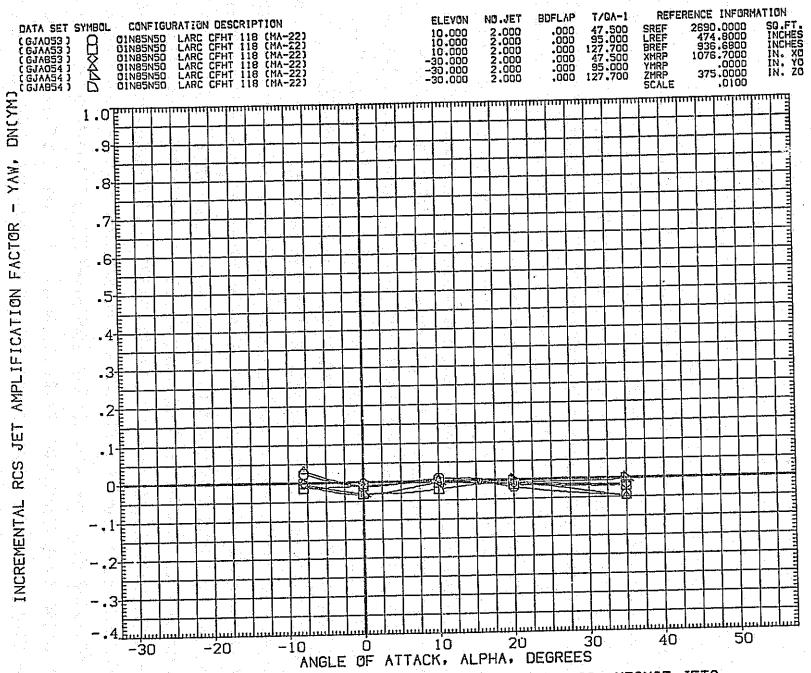


FIGURE 64. DELTA AMPLIFICATION FACTOR, ELEVON=10, AND -30, N50N85 JETS

[A]MACH = 10.33

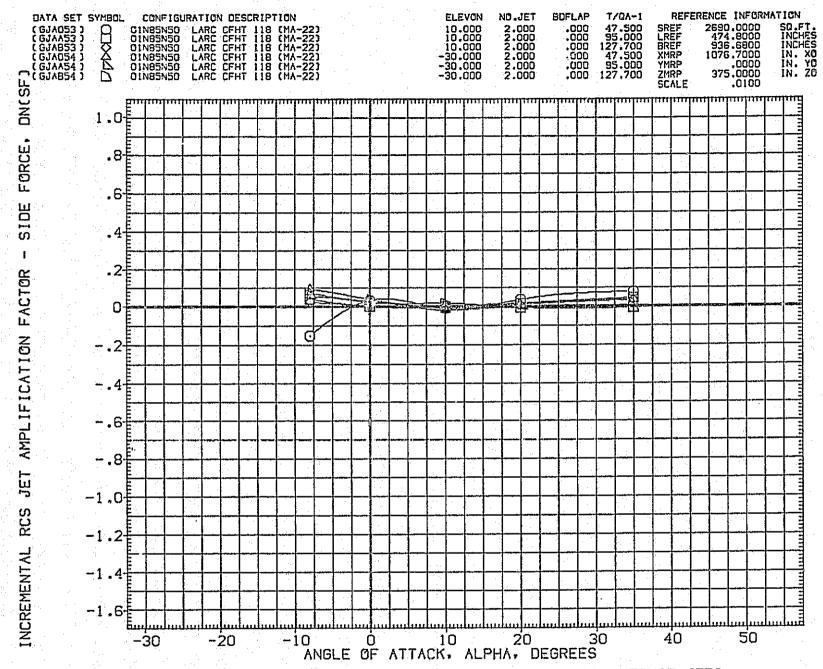


FIGURE 64. DELTA AMPLIFICATION FACTOR, ELEVON=10, AND -30, N50N85 JETS

[A]MACH = 10.33

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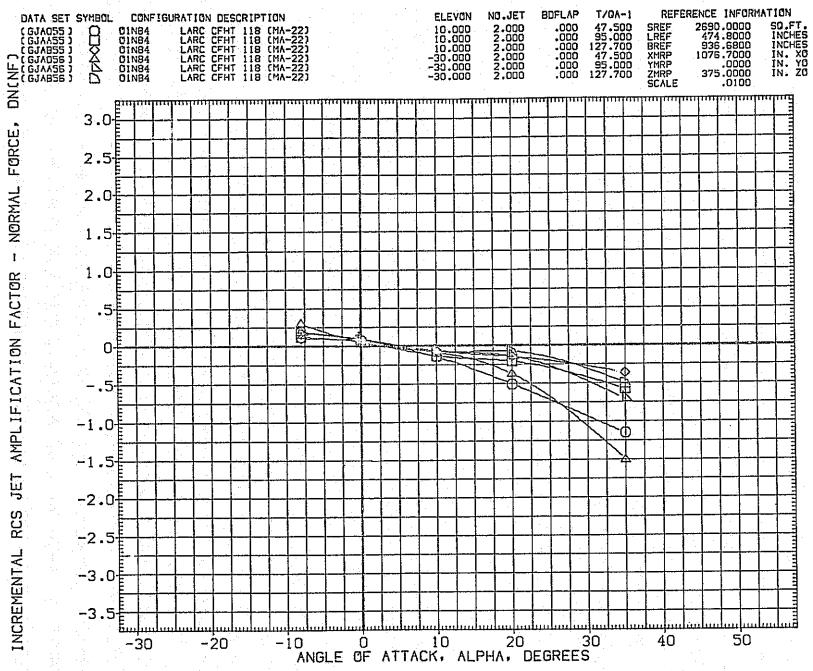


FIGURE 65. DELTA AMPLIFICATION FACTOR, ELEVON=10, AND -30, N84 JETS

[A]MACH = 10.33

PAGE

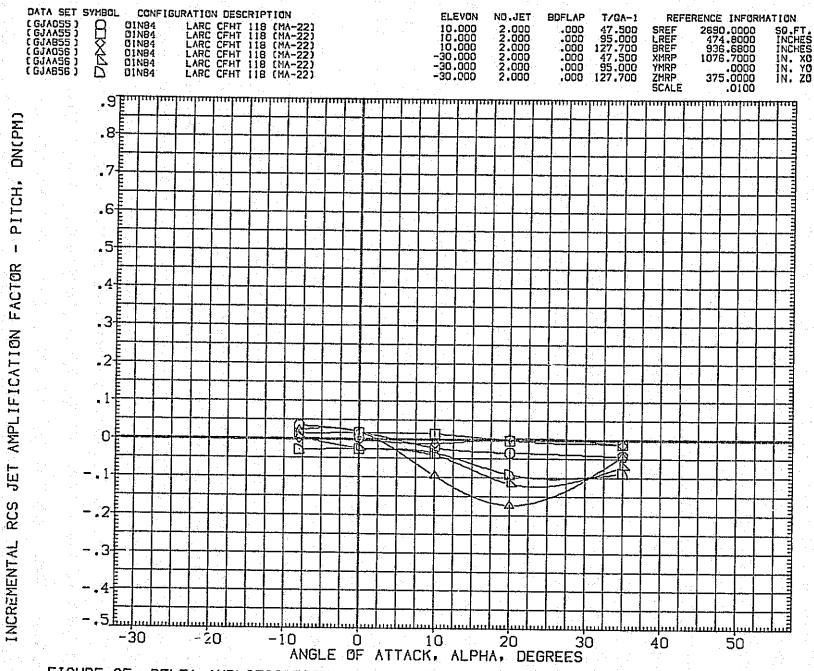


FIGURE 65. DELTA AMPLIFICATION FACTOR, ELEVON=10, AND -30, N84 JETS

[A]MACH = 10.33

PAGE 1180

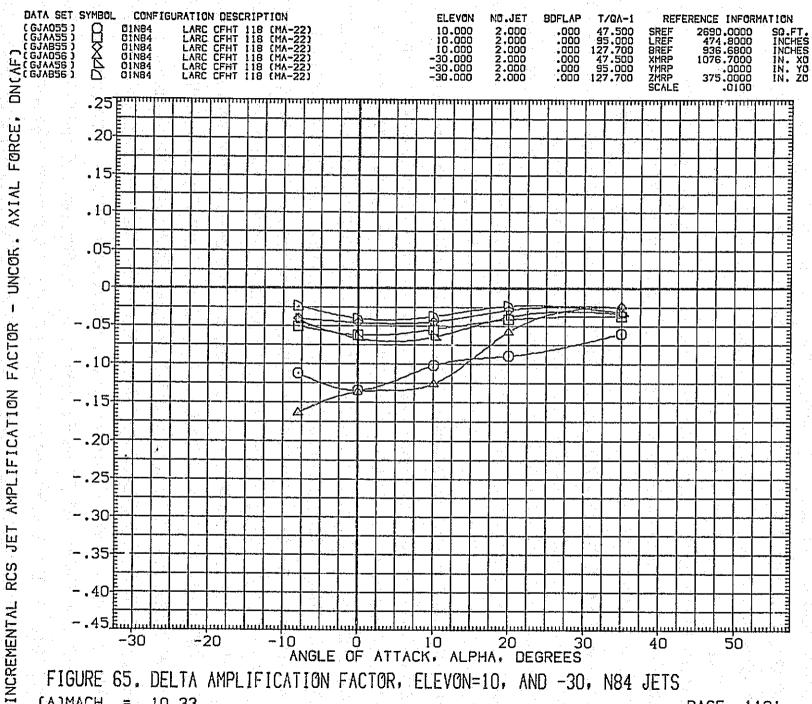


FIGURE 65. DELTA AMPLIFICATION FACTOR, ELEVON=10, AND -30, N84 JETS CADMACH = 10.33 PAGE

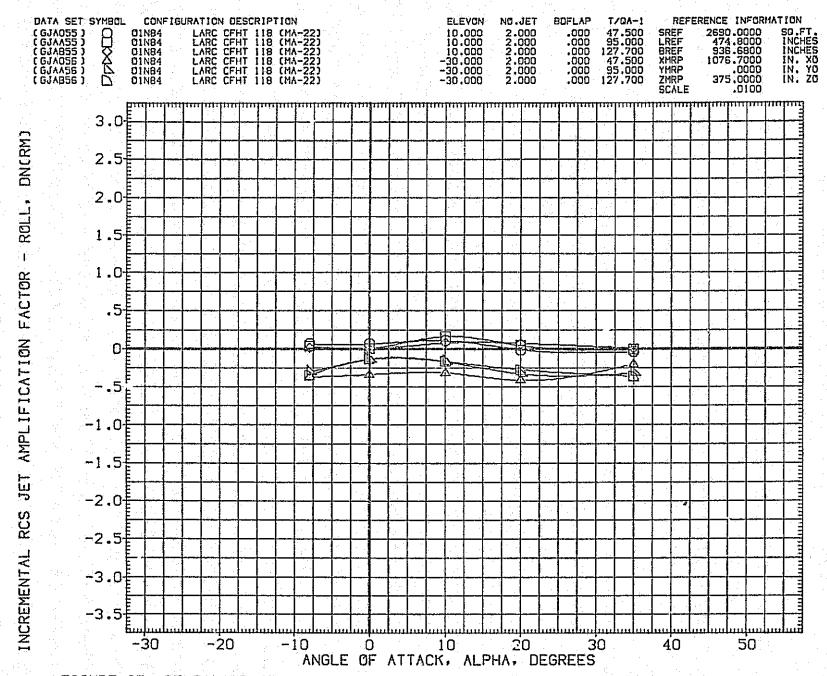


FIGURE 65. DELTA AMPLIFICATION FACTOR, ELEVON=10, AND -30, N84 JETS

[A]MACH = 10.33

PAGE 1182

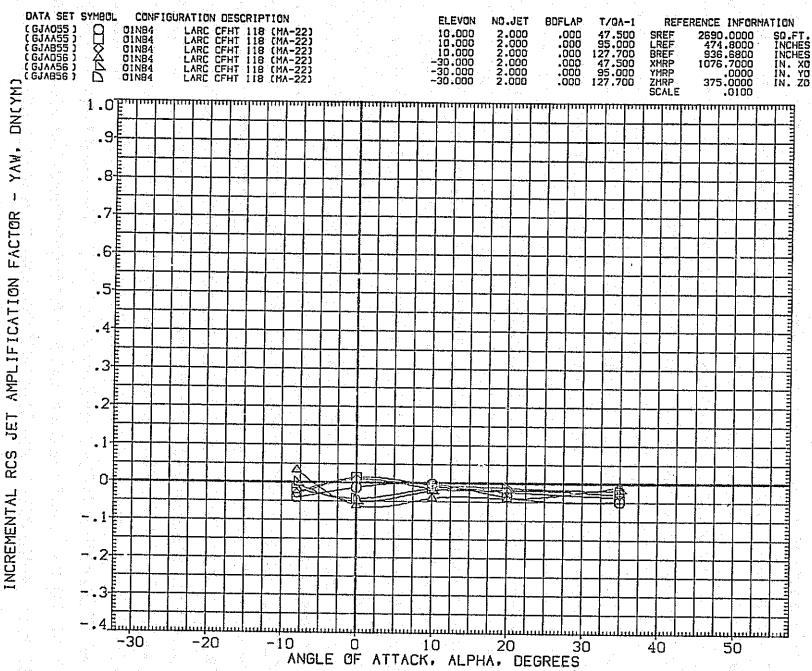


FIGURE 65. DELTA AMPLIFICATION FACTOR, ELEVON=10, AND -30, N84 JETS

(A)MACH = 10.33

PAGE 1183

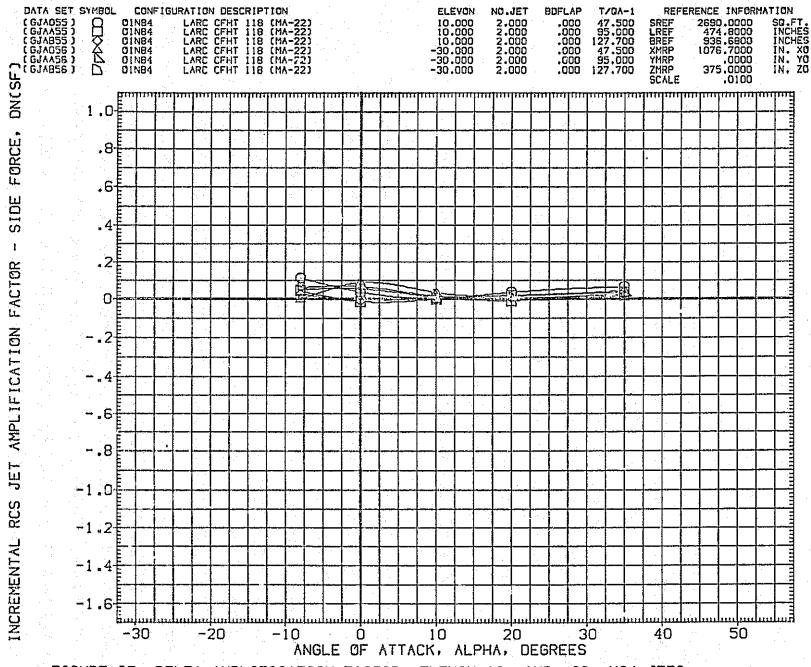


FIGURE 65. DELTA AMPLIFICATION FACTOR, ELEVON=10, AND -30, N84 JETS

[A]MACH = 10.33

PAGE 1184

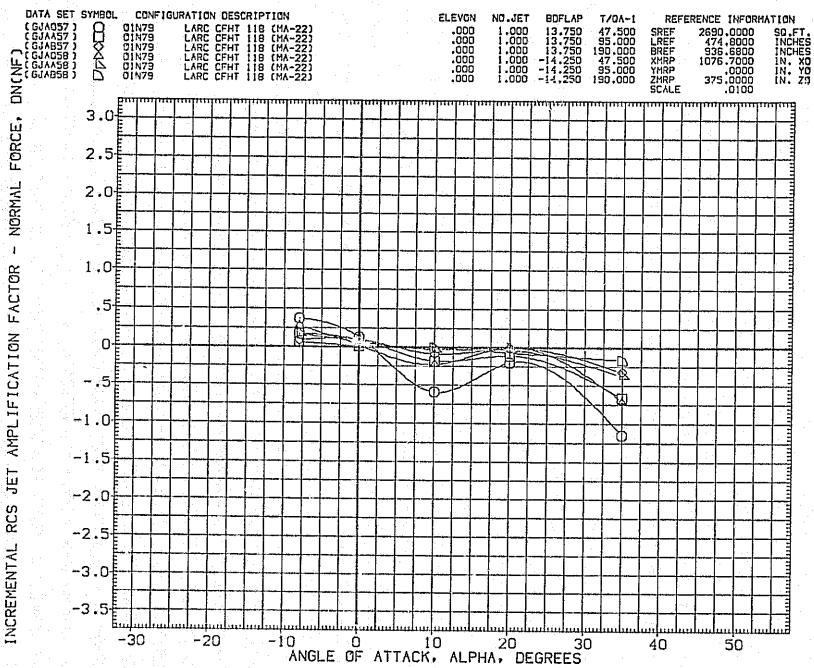


FIGURE 66. DELTA AMPLIFICATION FACTOR, BODYFLAP=13.75, AND -14.25, N79 JET

CADMACH = 10.33

PAGE 1185

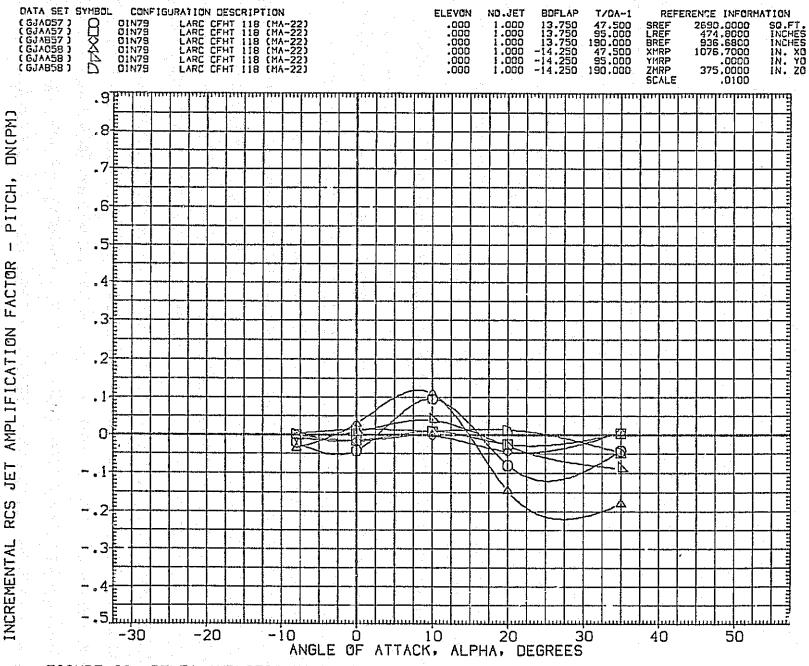
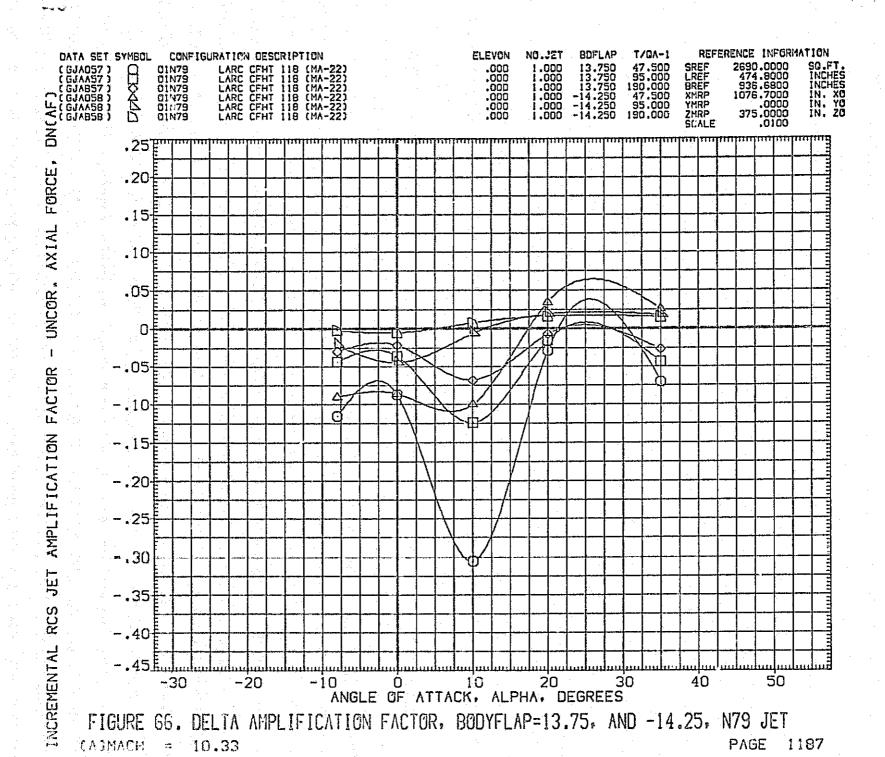


FIGURE 66. DELTA AMPLIFICATION FACTOR, BODYFLAP=13.75, AND -14.25, N79 JET

(A)MACH = 10.33

PAGE 1186



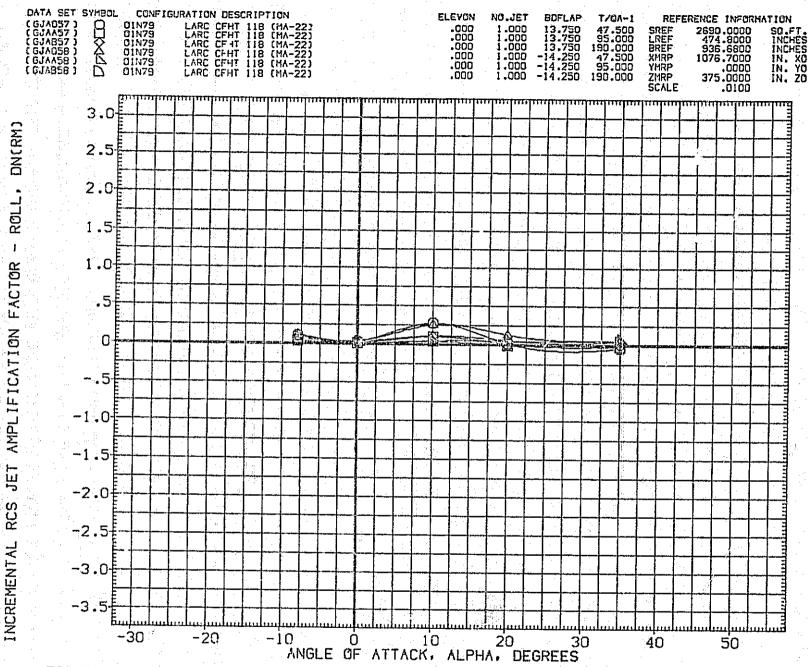


FIGURE 66. DELTA AMPLIFICATION FACTOR, BODYFLAP=13.75, AND -14.25, N79 JET CASMACH = 10.33

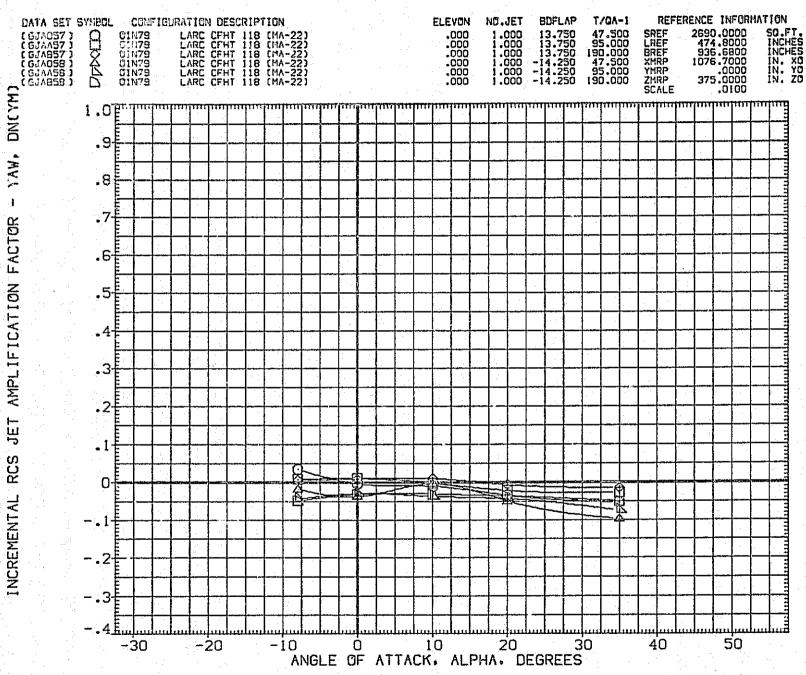


FIGURE 66. DELTA AMPLIFICATION FACTOR, BODYFLAP=13.75, AND -14.25, N79 JET

(A)MACH = 10.33

PAGE 1189

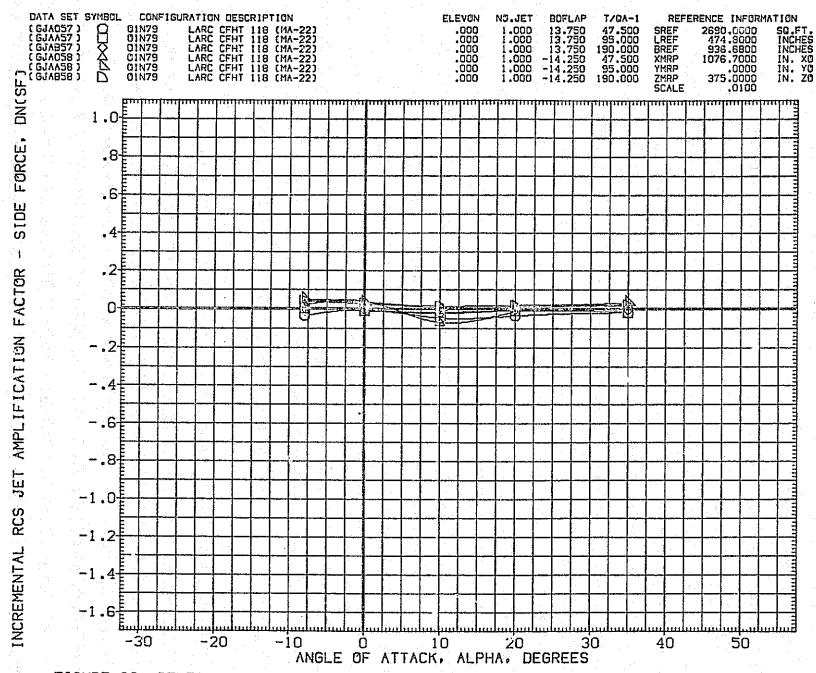


FIGURE 66. DELTA AMPLIFICATION FACTOR, BODYFLAP=13.75, AND -14.25, N79 JET (A)MACH = 10.33



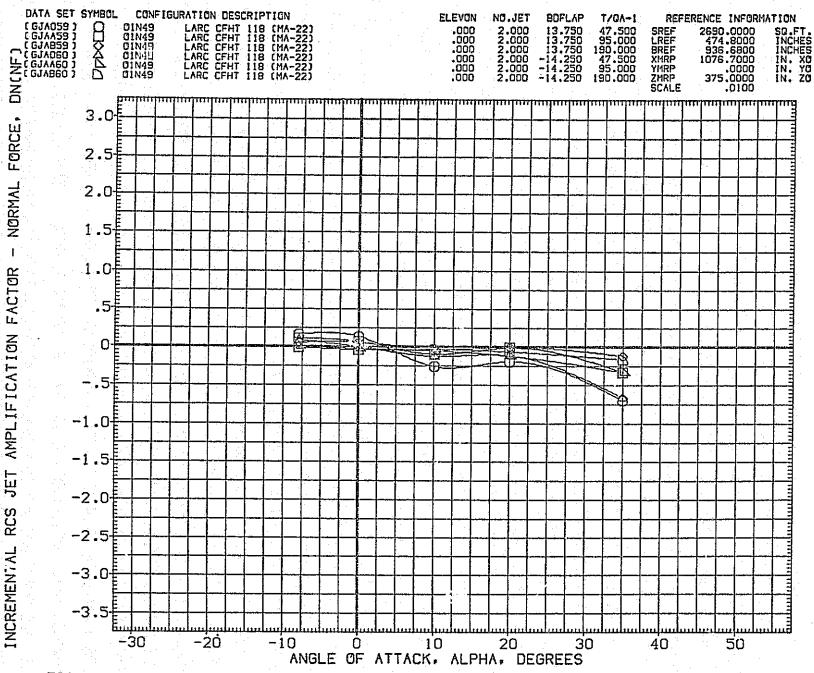


FIGURE 67. DELTA AMPLIFICATION FACTOR, BODYFLAP=13.75, AND -14.25, N49 JETS

(A)MACH = 10.33

PAGE 1191

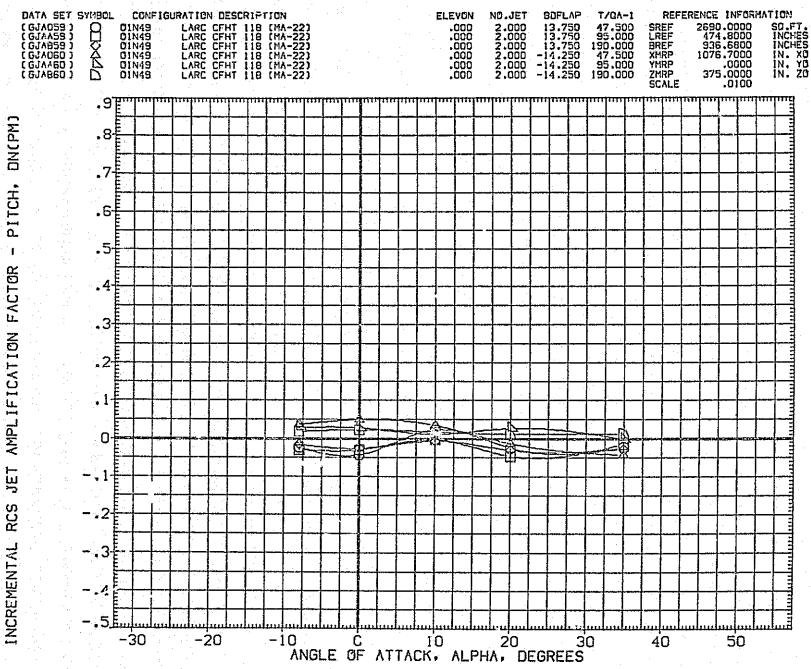


FIGURE 67. DELTA AMPLIFICATION FACTOR, BODYFLAP=13.75, AND -14.25, N49 JETS

(A)MACH = 10.33

PAGE 1192

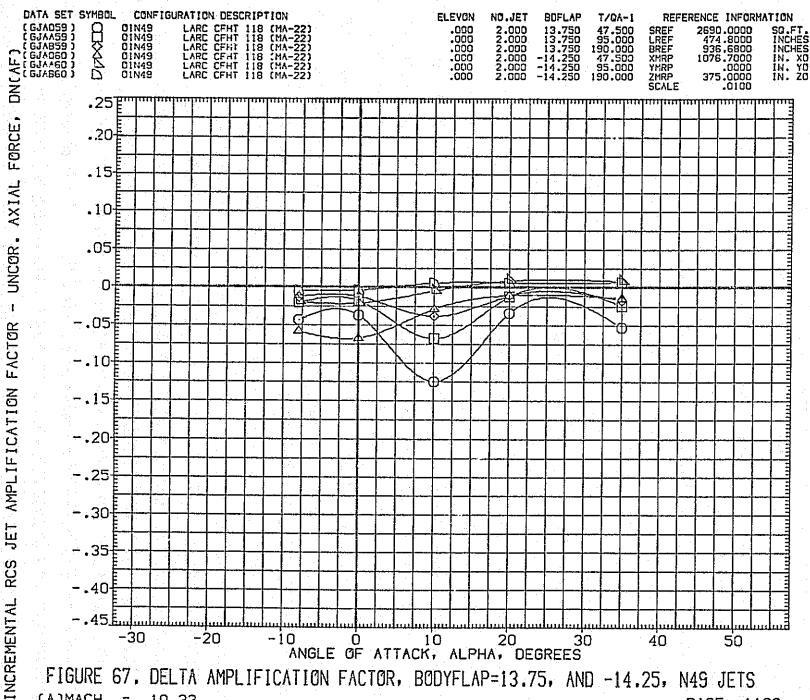


FIGURE 67. DELTA AMPLIFICATION FACTOR, BODYFLAP=13.75, AND -14.25, N49 JETS (A)MACH = 10.33 PAGE 1193

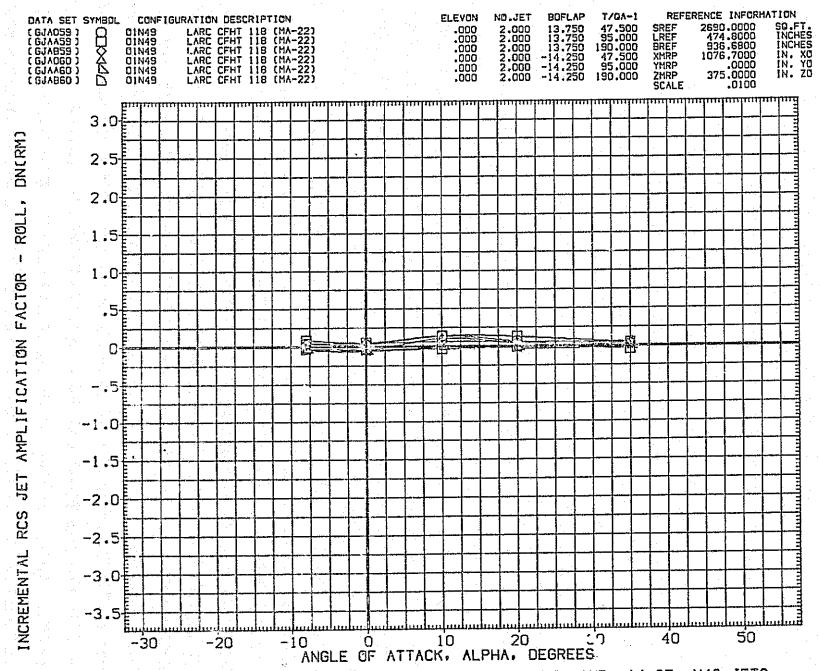


FIGURE 67. DELTA AMPLIFICATION FACTOR, BODYFLAP=13.75, AND -14.25, N49 JETS

[A]MACH = 10.33

PAGE 1194

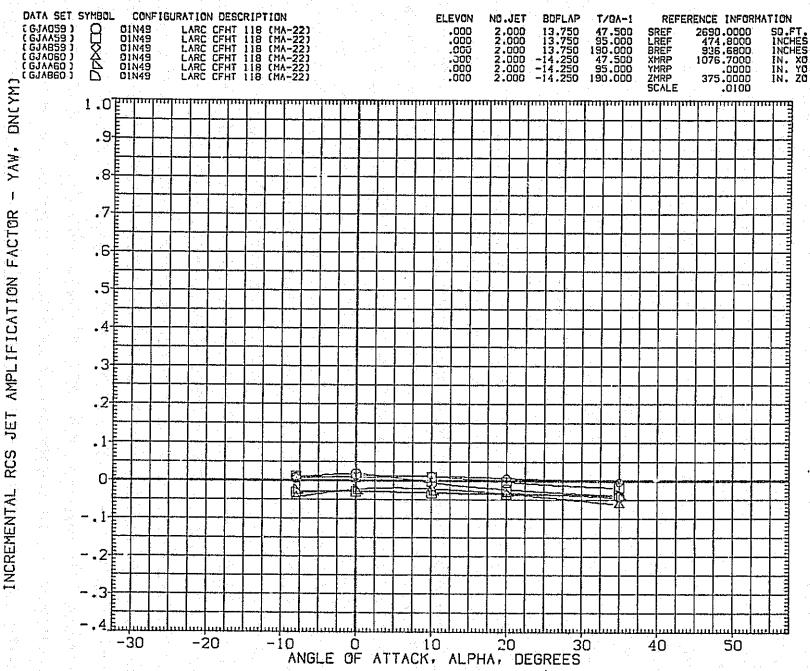


FIGURE 67. DELTA AMPLIFICATION FACTOR, BODYFLAP=13.75, AND -14.25, N49 JETS

[A]MACH = 10.33

PAGE 1195

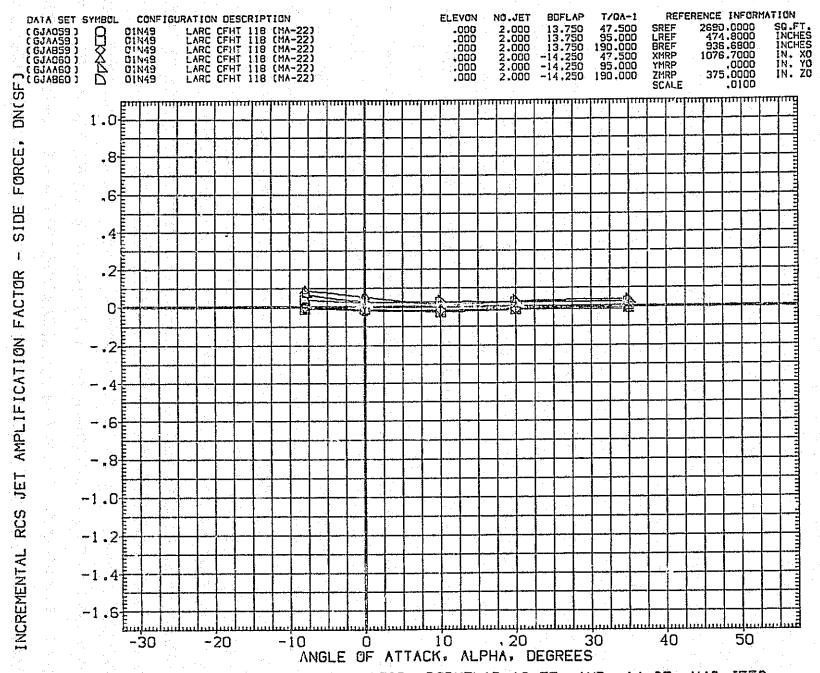


FIGURE 67. DELTA AMPLIFICATION FACTOR, BODYFLAP=13.75, AND -14.25, N49 JETS

(A)MACH = 10.33

PAGE 1196

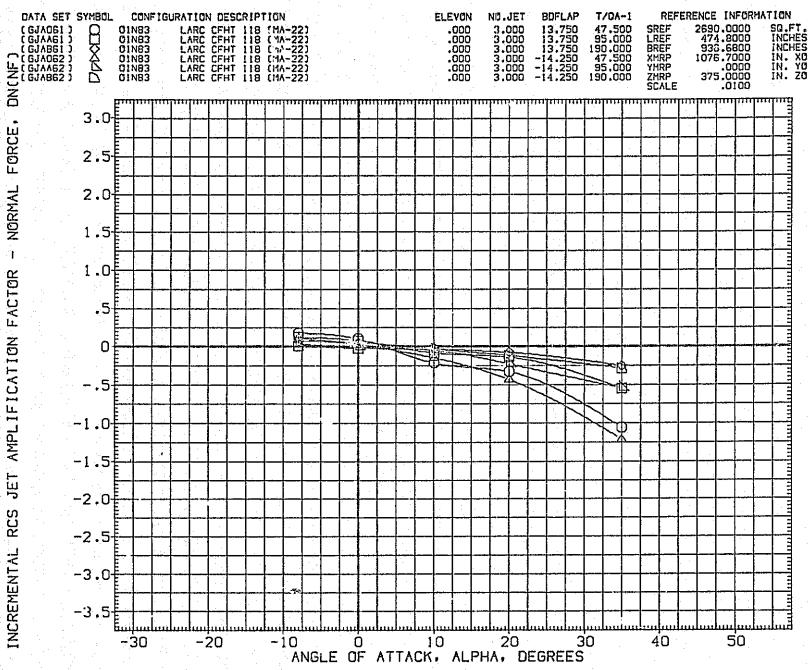


FIGURE 68. DELTA AMPLIFICATION FACTOR, BODYFLAP=13.75, AND -14.25, N83 JETS

[A]MACH = 10.33

PAGE 1197

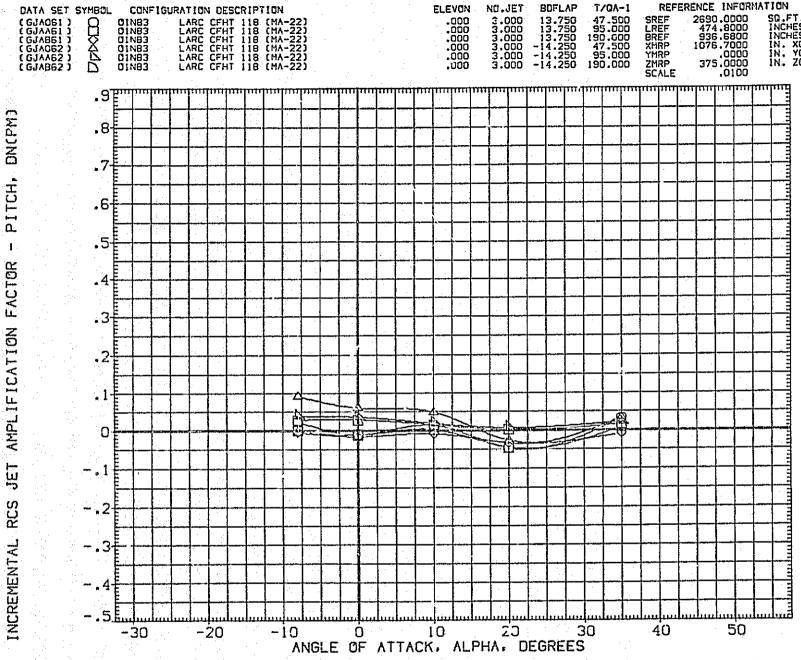


FIGURE 68. DELTA AMPLIFICATION FACTOR, BODYFLAP=13.75, AND -14.25, N83 JETS

(A)MACH = 10.33

PAGE 1198

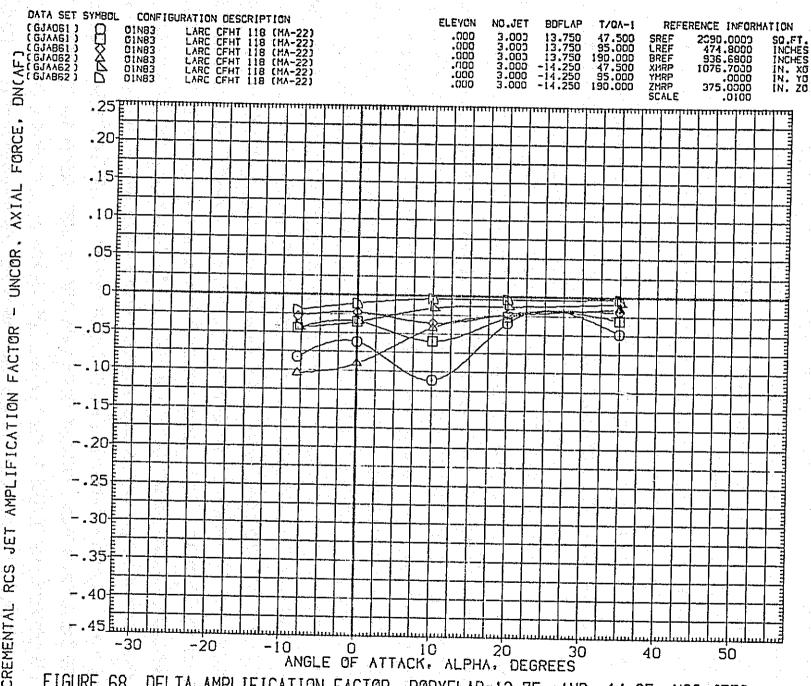


FIGURE 68. DELTA AMPLIFICATION FACTOR, BODYFLAP=13.75, AND -14.25, N83 JETS

(A)MACH = 10.33

PAGE 1199

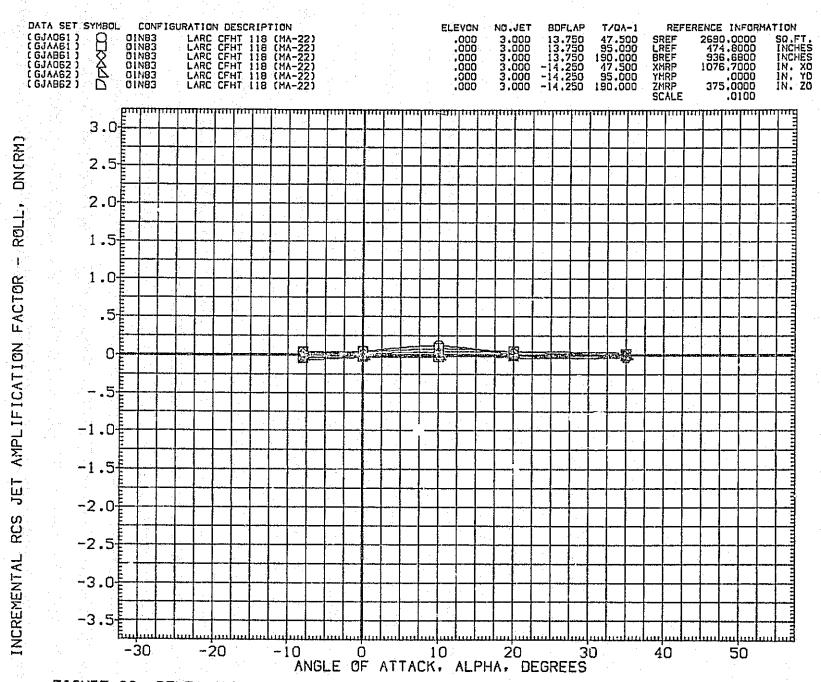


FIGURE 68. DELTA AMPLIFICATION FACTOR, BODYFLAP=13.75, AND -14.25, N83 JETS
(A)MACH = 10.33

PAGE 1200

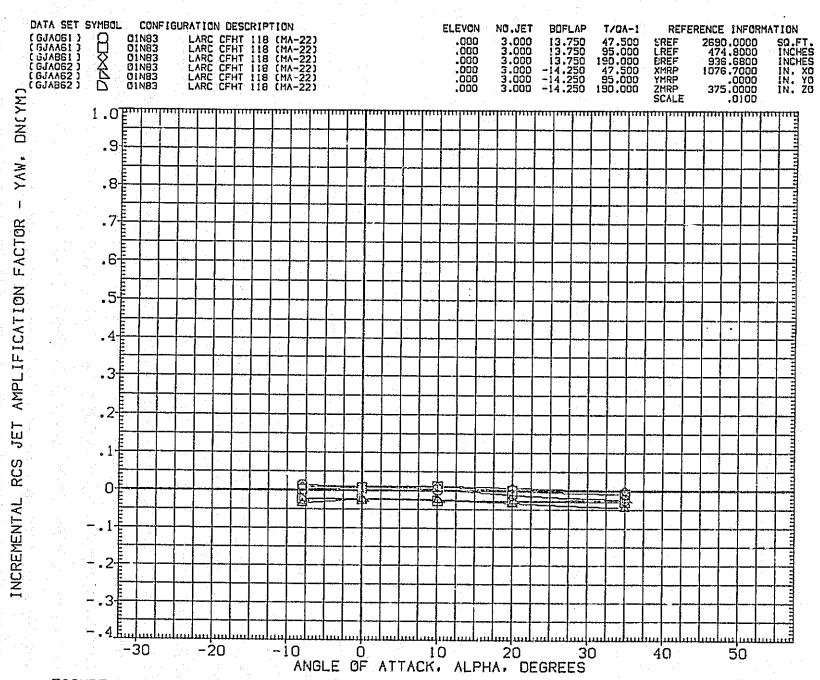
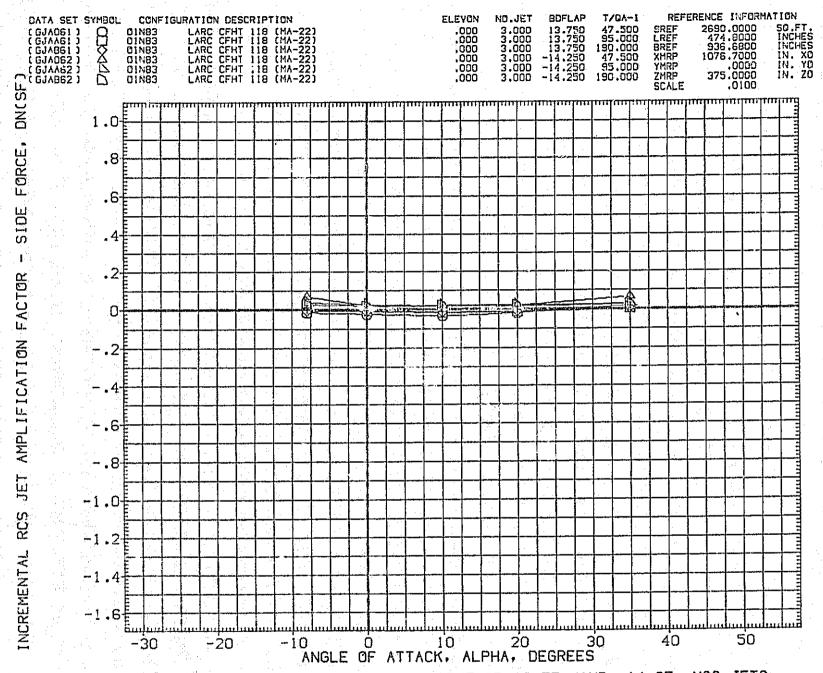


FIGURE 68. DELTA AMPLIFICATION FACTOR, BODYFLAP=13.75, AND -14.25, N83 JETS

[A)MACH = 10.33

PAGE 1201



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FIGURE 68. DELTA AMPLIFICATION FACTOR, BODYFLAP=13.75, AND -14.25, N83 JETS

(A)MACH = 10.33

PAGE 1202

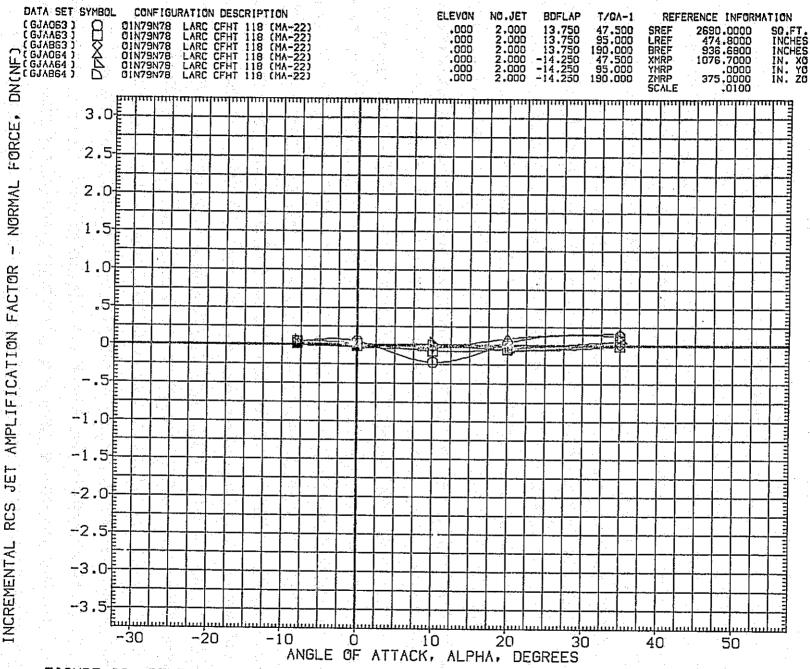


FIGURE 69. DELTA AMPLIFICATION FACTOR, BODYFLAP=13.75, AND -14.25, N79N78 JETS (A)MACH = 10.33

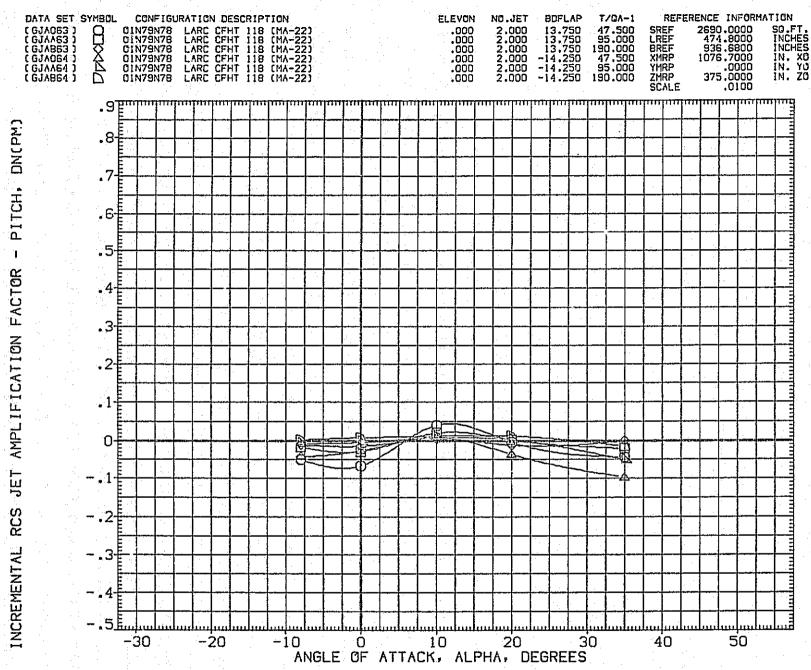


FIGURE 69. DELTA AMPLIFICATION FACTOR, BODYFLAP=13.75, AND -14.25, N79N78 JETS

(A)MACH = 10.33

PAGE 1204

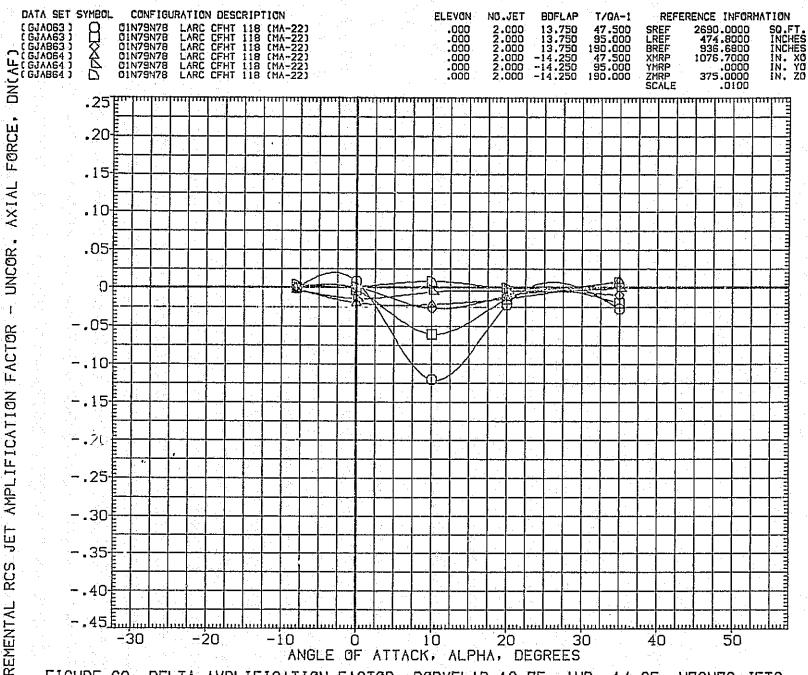


FIGURE 69. DELTA AMPLIFICATION FACTOR, BODYFLAP=13.75, AND -14.25, N79N78 JETS

(A)MACH = 10.33

PAGE 1205

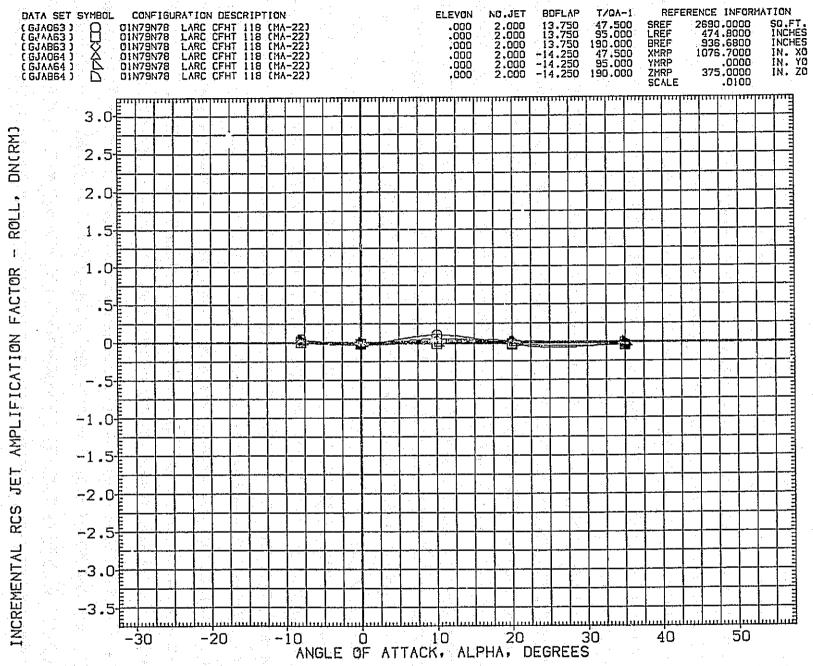


FIGURE 69. DELTA AMPLIFICATION FACTOR, BODYFLAP=13.75, AND -14.25, N79N78 JETS

(A)MACH = 10.33

PAGE 1206

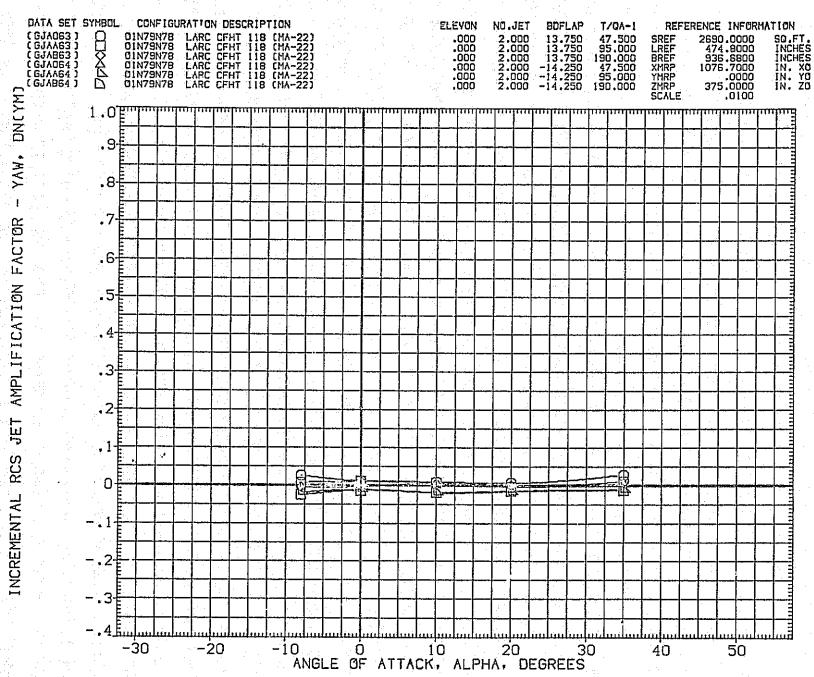


FIGURE 69. DELTA AMPLIFICATION FACTOR, BODYFLAP=13.75, AND -14.25, N79N78 JETS

[A]MACH = 10.33

PAGE 1207

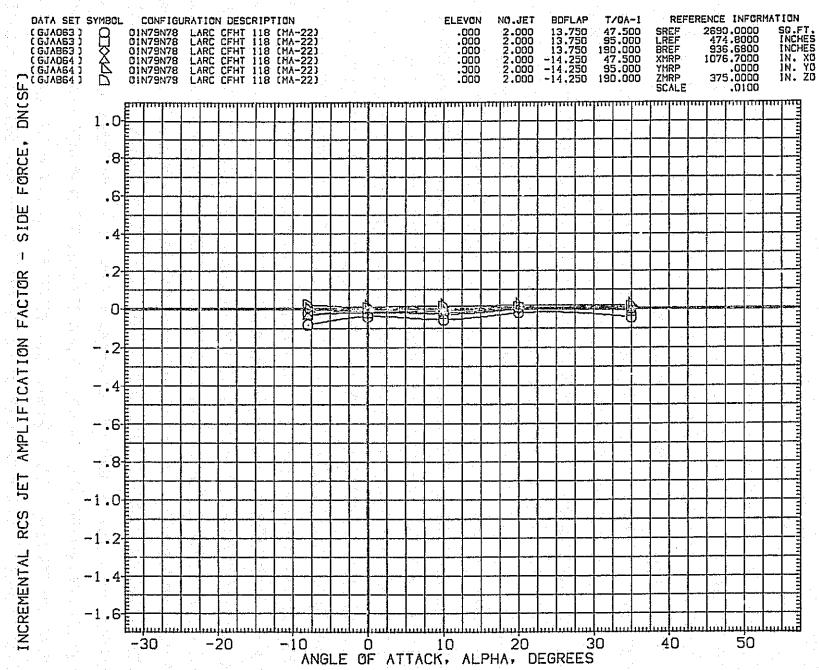


FIGURE 69. DELTA AMPLIFICATION FACTOR, BODYFLAP=13.75, AND -14.25, N79N78 JETS

(A)MACH = 10.33

PAGE 1208

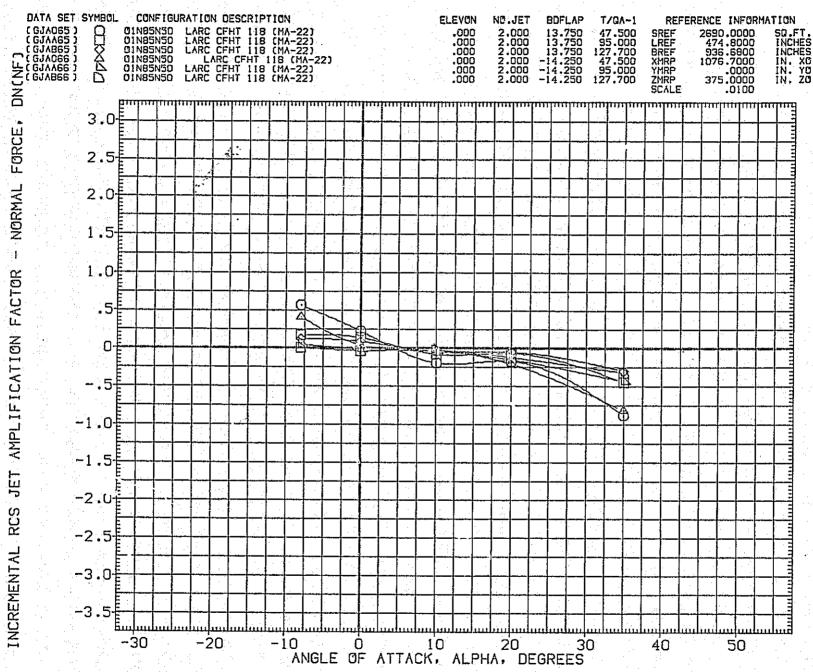


FIGURE 70. DELTA AMPLIFICATION FACTOR, BODYFLAP=13.75, AND -14.25, N50N85 JETS (A)MACH = 10.33

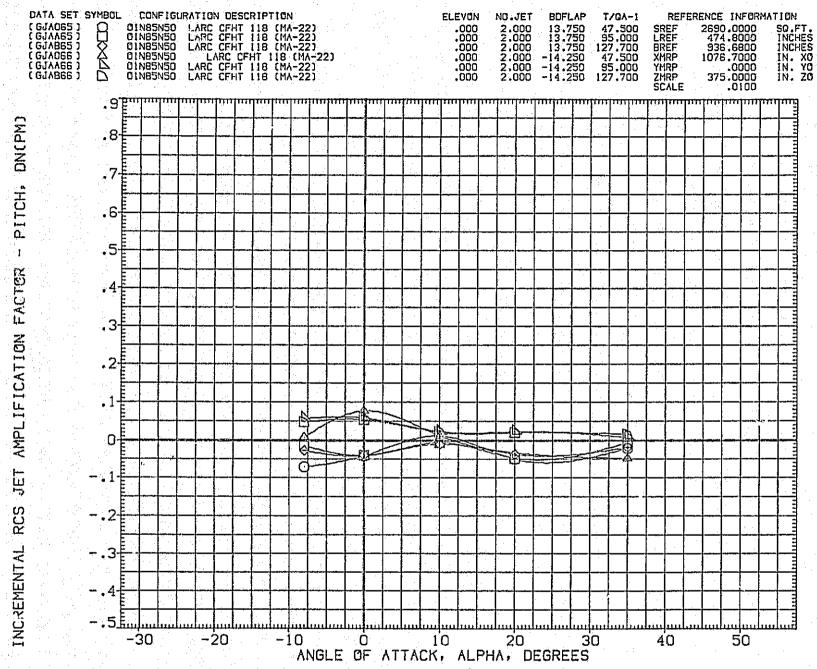
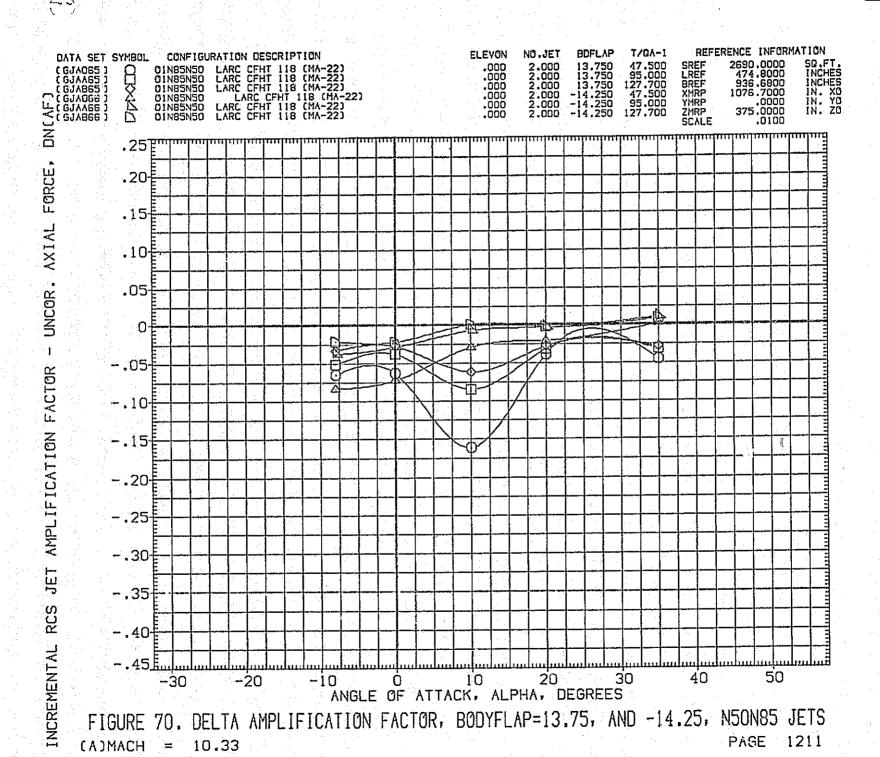


FIGURE 70. DELTA AMPLIFICATION FACTOR, BODYFLAP=13.75, AND -14.25, N50N85 JETS

(A)MACH = 10.33

PAGE 1210



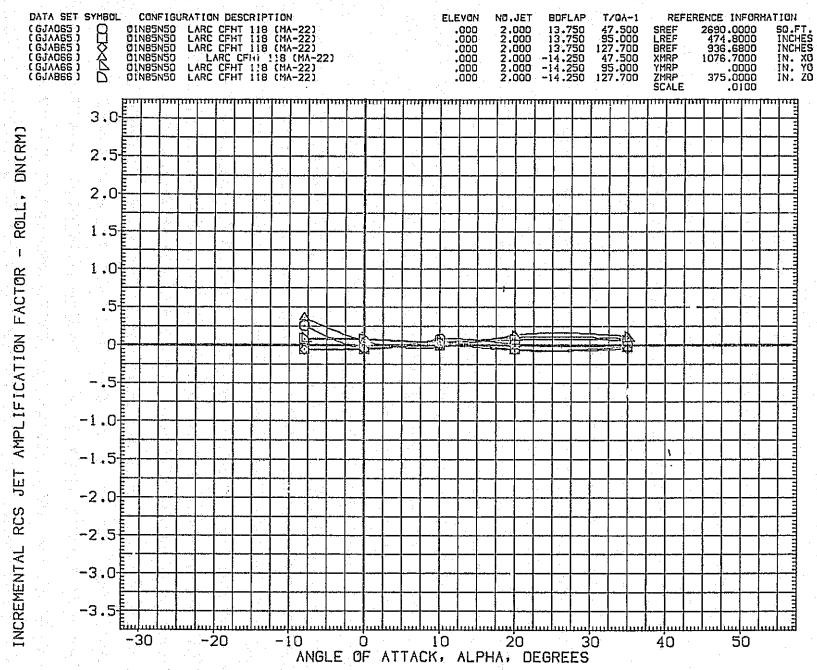


FIGURE 70. DELTA AMPLIFICATION FACTOR, BODYFLAP=13.75, AND -14.25, N50N85 JETS

(A)MACH = 10.33

PAGE 1212

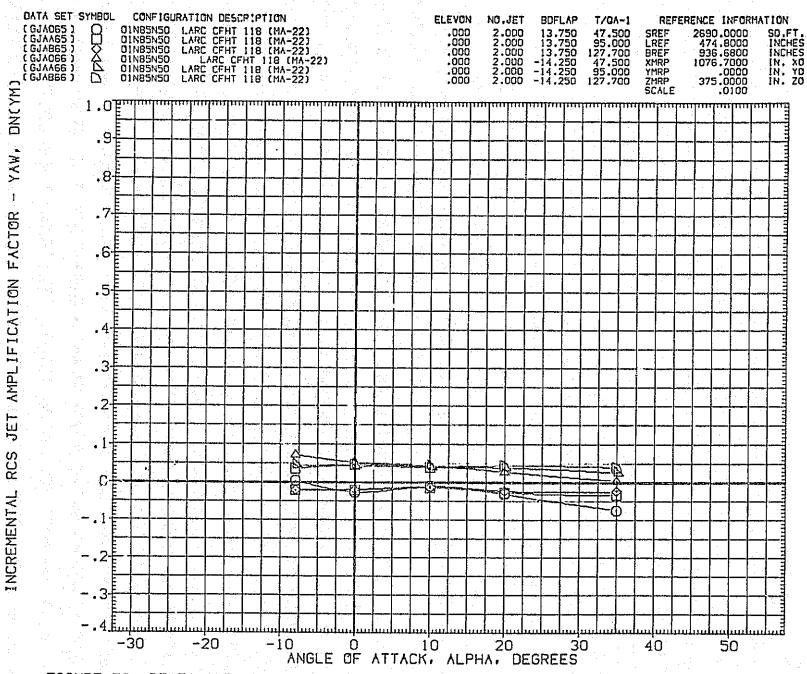


FIGURE 70. DELTA AMPLIFICATION FACTOR, BODYFLAP=13.75, AND -14.25, N50N85 JETS (A)MACH = 16.33

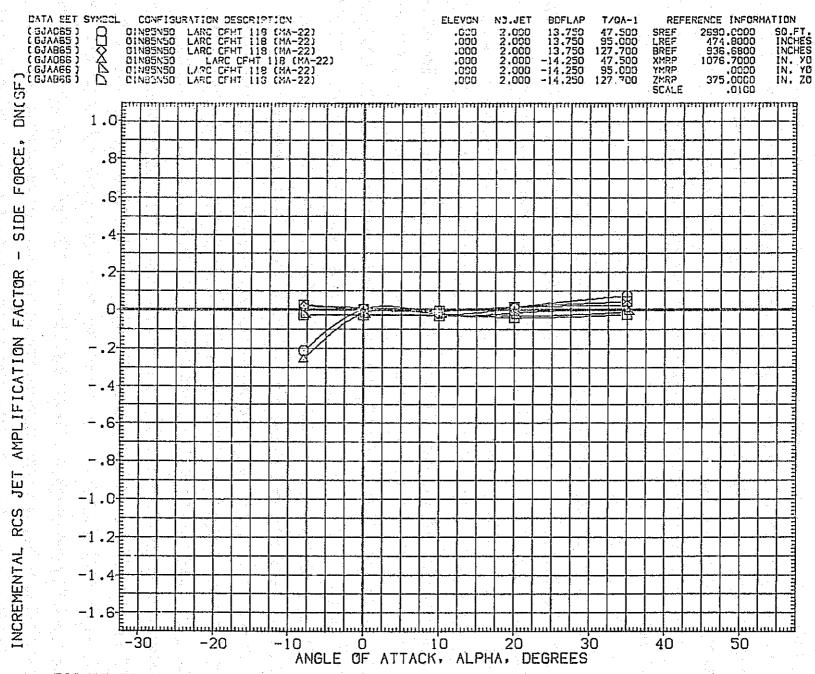


FIGURE 70. DELTA AMPLIFICATION FACTOR, BODYFLAP=13.75, AND -14.25, N50N85 JETS (A)MACH = 10.33

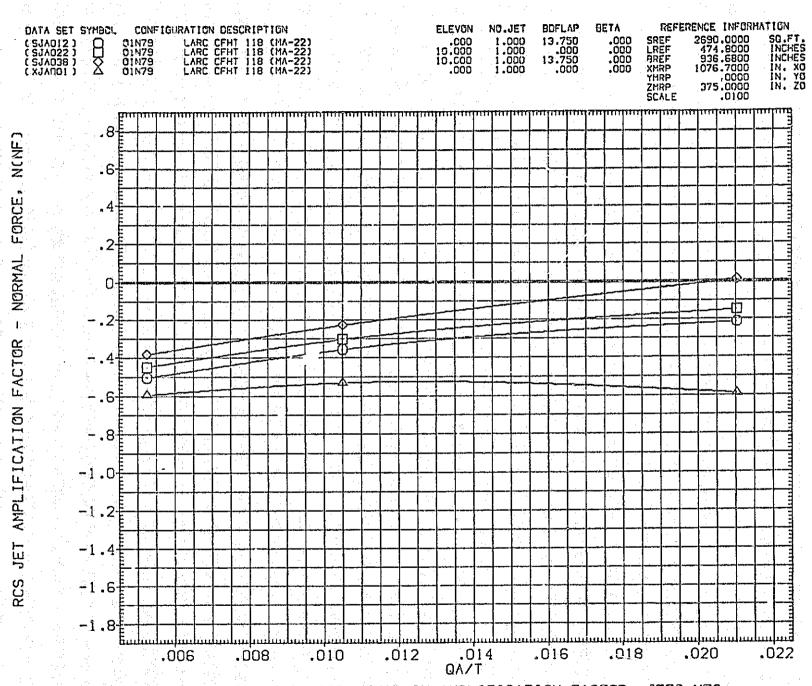


FIGURE 71. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79

(A)ALPHA = -8.00

PAGE 1215

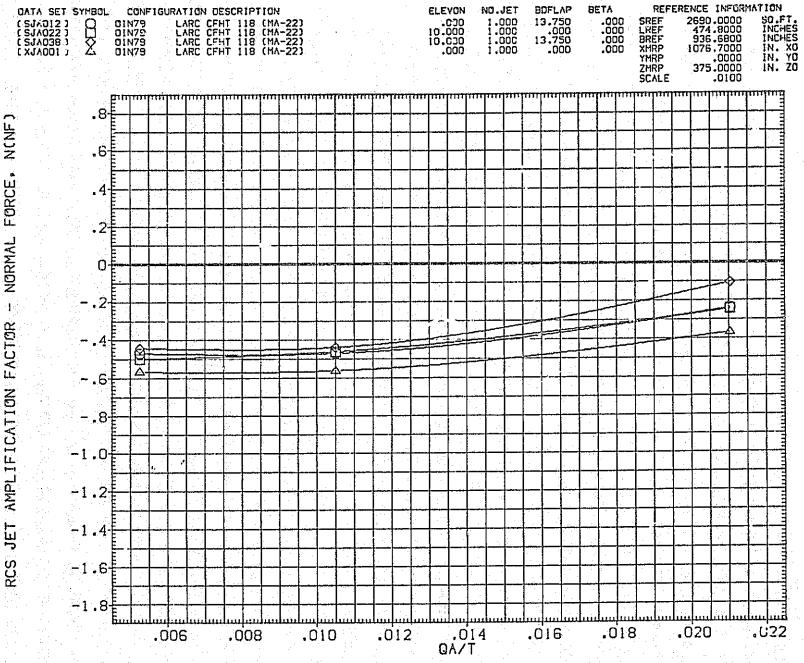


FIGURE 71. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79

(B) ALPHA = .00

PAGE 1216

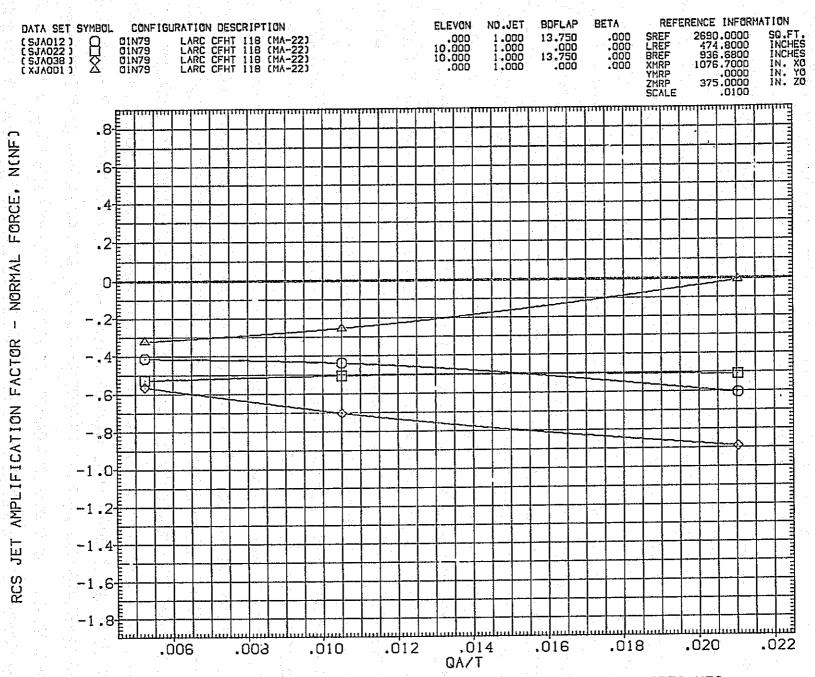


FIGURE 71. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79

(C)ALPHA = 10.00

PAGE 1217

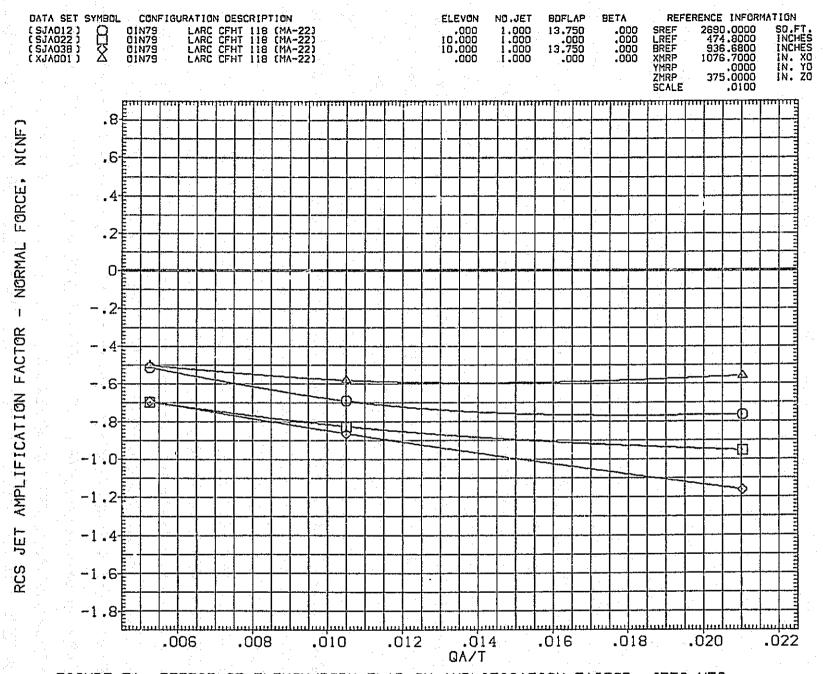


FIGURE 71. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79

CD)ALPHA = 20.00 PAGE 1218

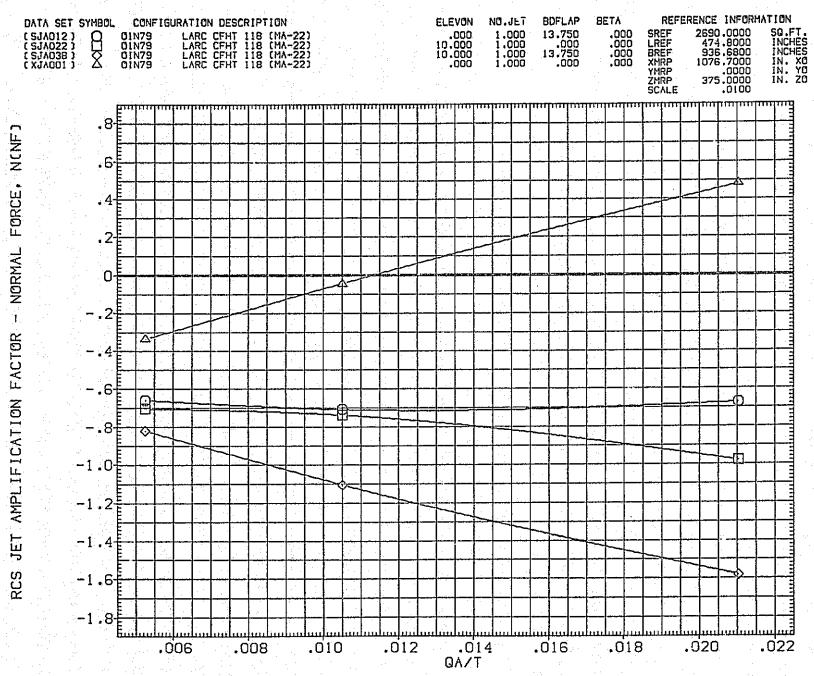


FIGURE 71. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79

(E)ALPHA = 35.00

PAGE 1219

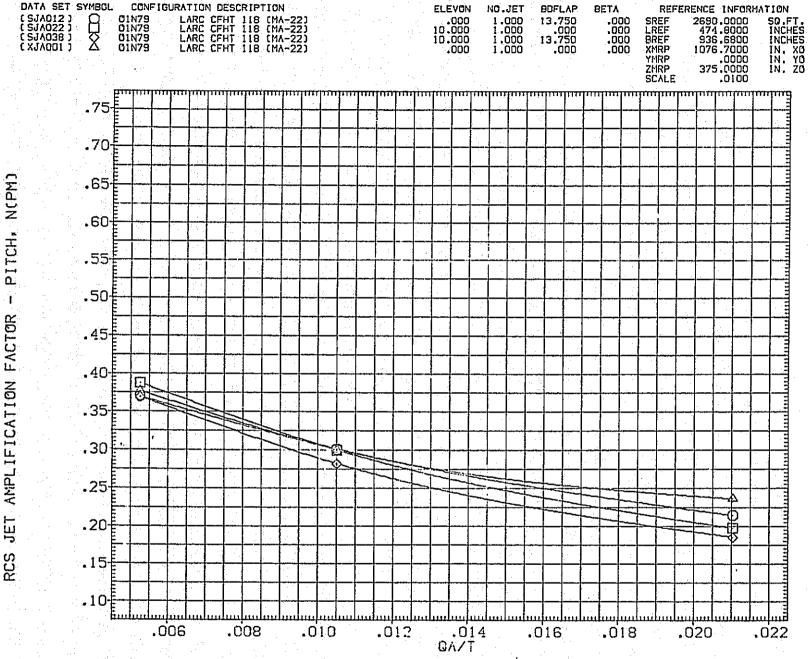


FIGURE 71. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79

[A]ALPHA = -8.00

PAGE 1220

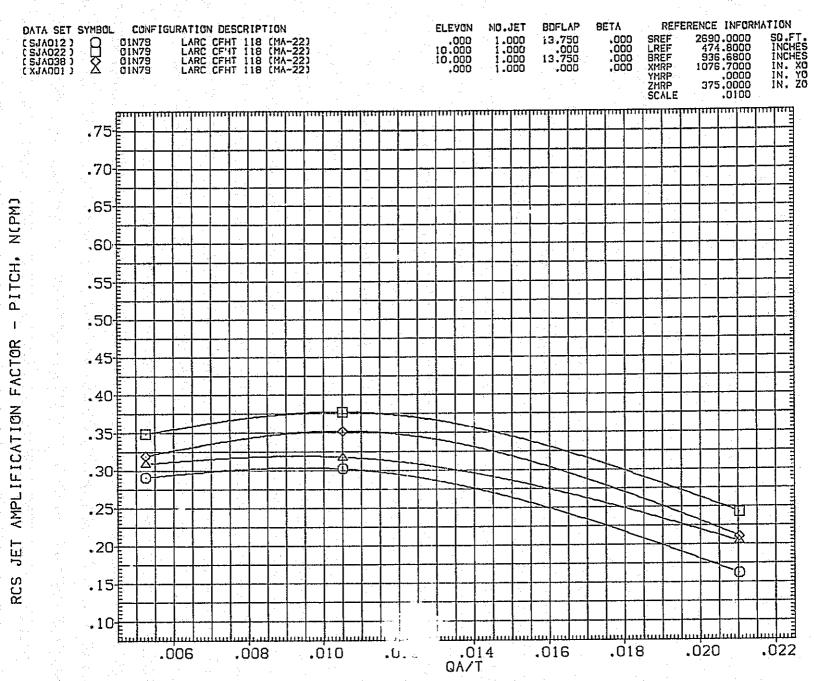


FIGURE 71. EFFECT OF ELEVEN/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79

(B) ALPHA = .00

PAGE 1221

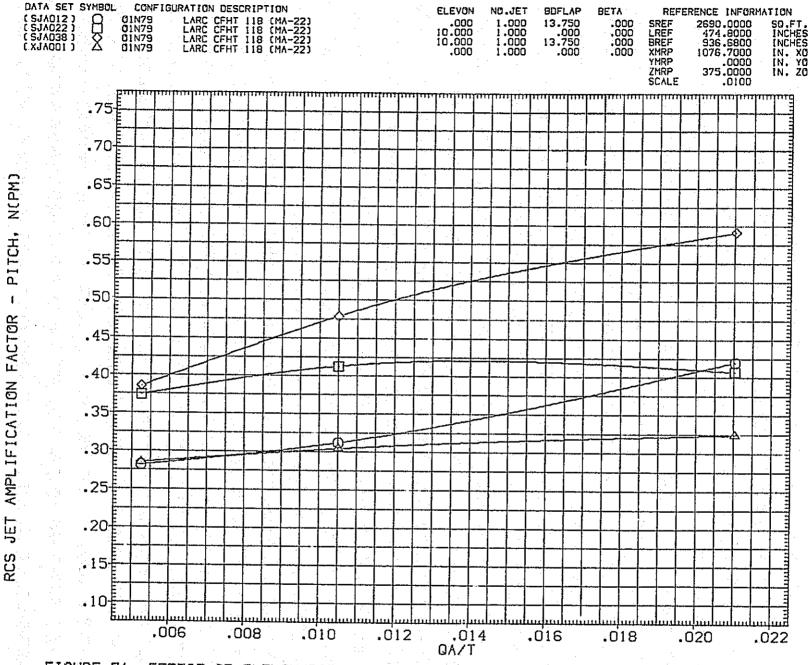


FIGURE 71. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79

(CJALPHA = 10.00

PAGE 1222

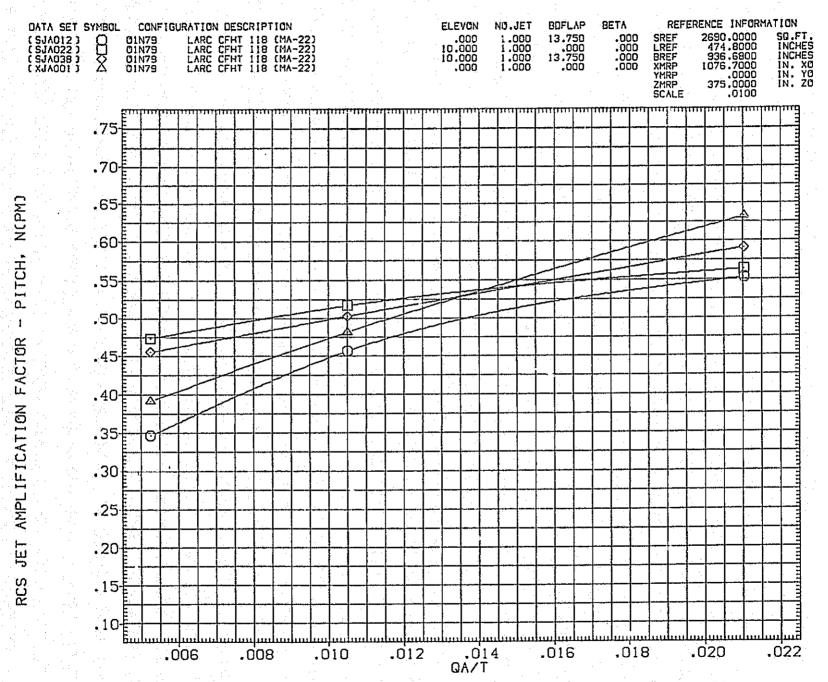


FIGURE 71. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79

[D]ALPHA = 20.00

PAGE 1223

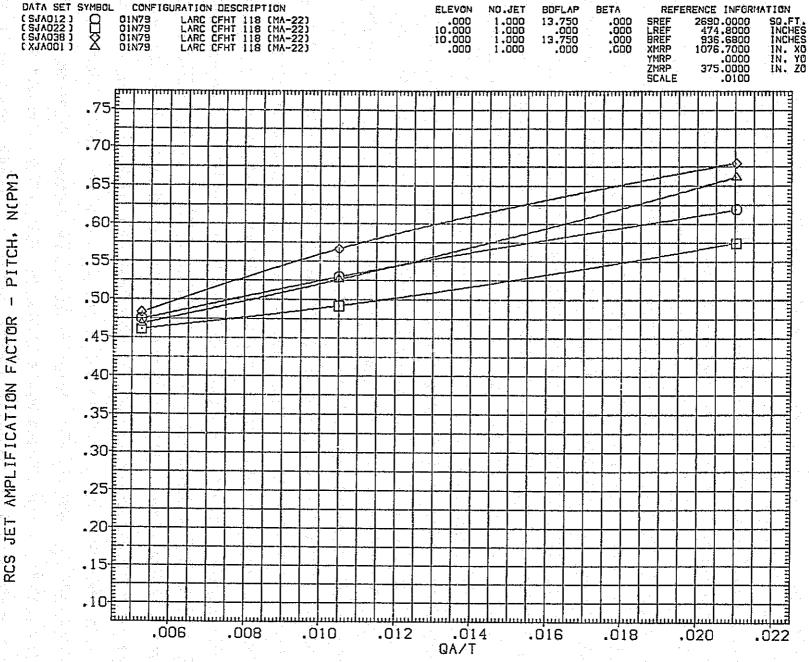


FIGURE 71. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79

(E)ALPHA = 35.00

PAGE 1224

1225

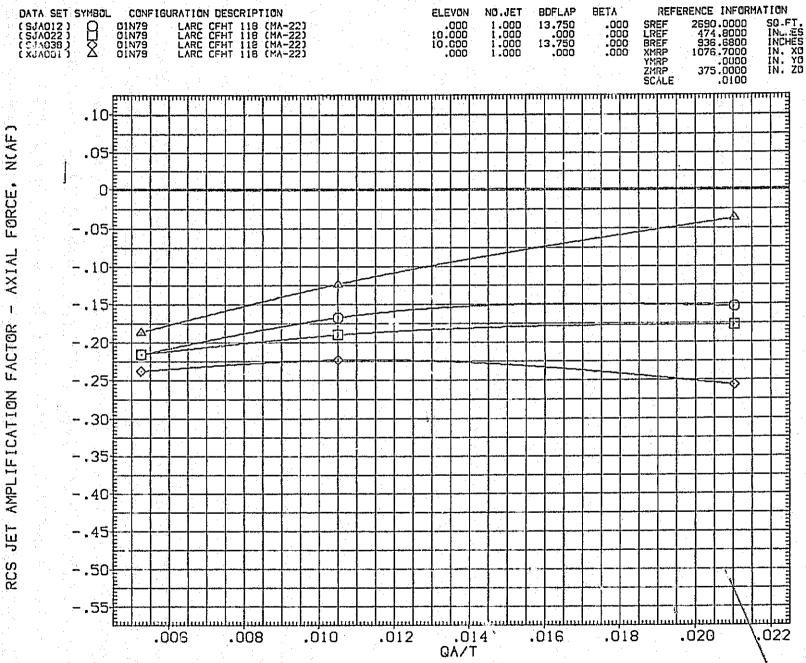


FIGURE 71. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79 PAGE (A)ALPHA =-8.00

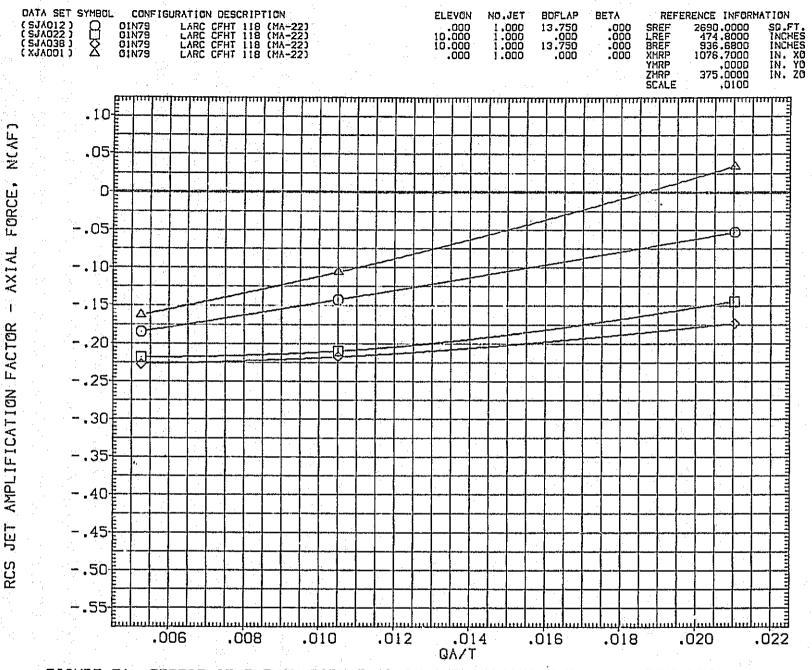


FIGURE 71. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79

(B)ALPHA = .00

PAGE 1226

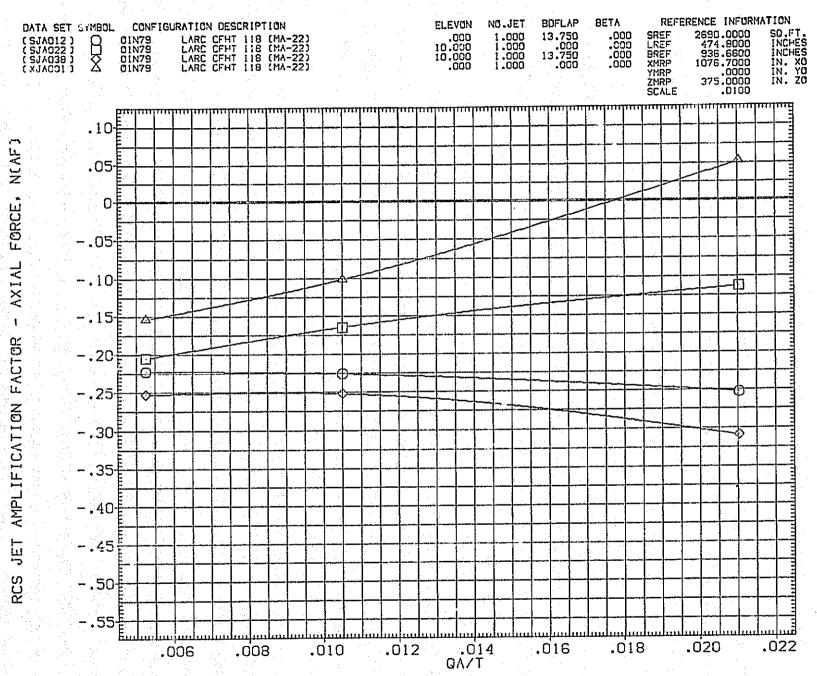


FIGURE 71. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79

COALPHA = 10.00

PAGE 1227

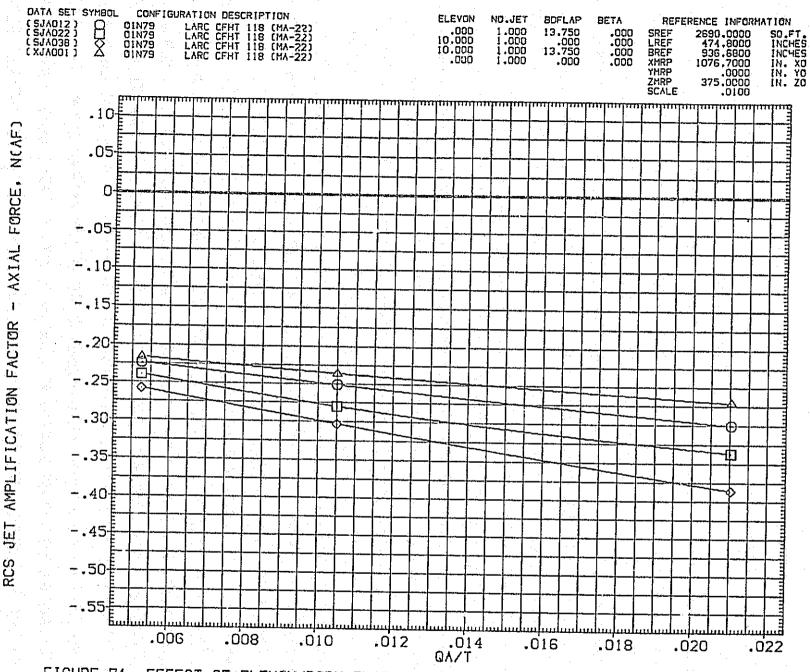


FIGURE 71. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79

CD)ALPHA = 20.00

PAGE 1228

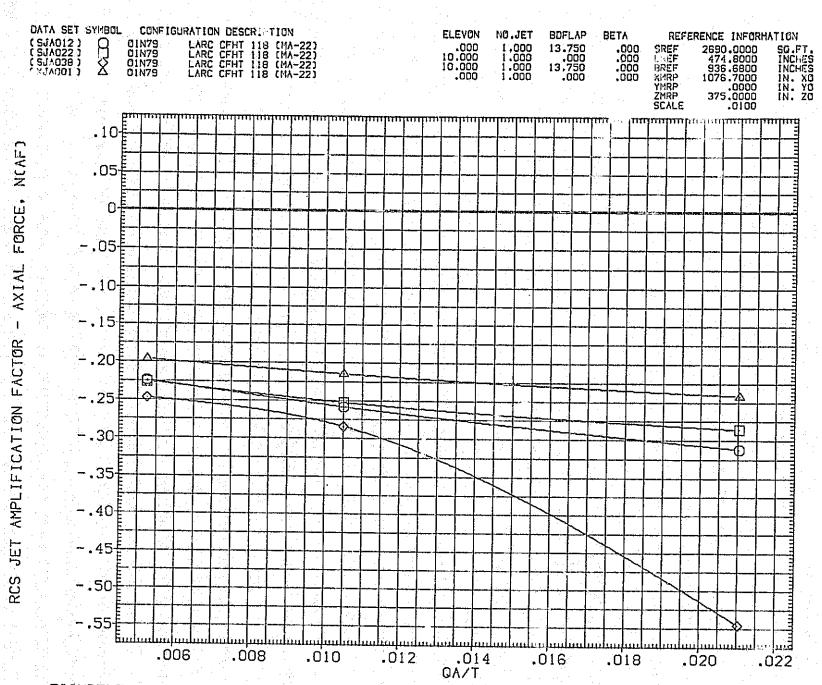


FIGURE 71. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79

(E)ALPHA = 35.00

PAGE 1229

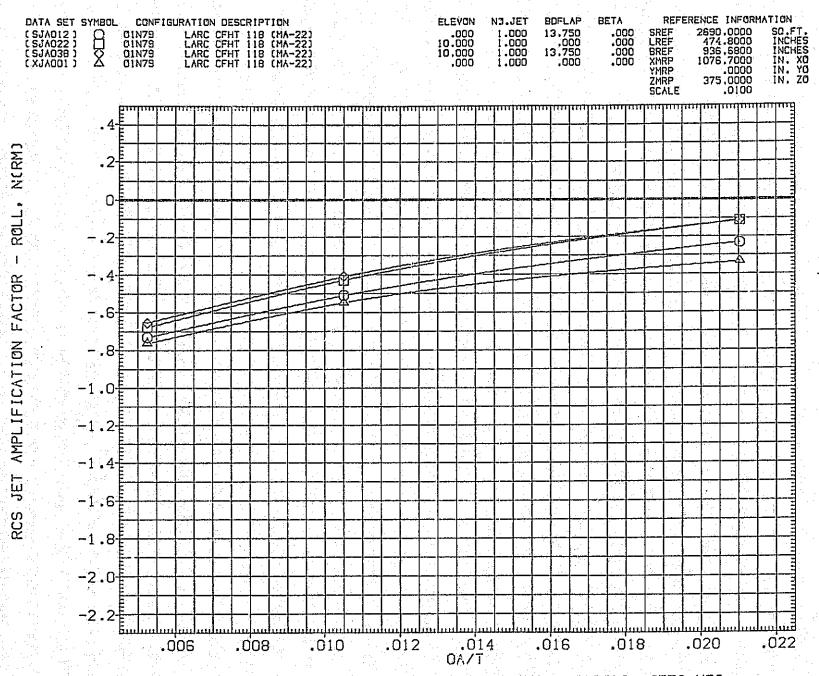


FIGURE 71. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79

(A)ALPHA = -8.00

PAGE 1230

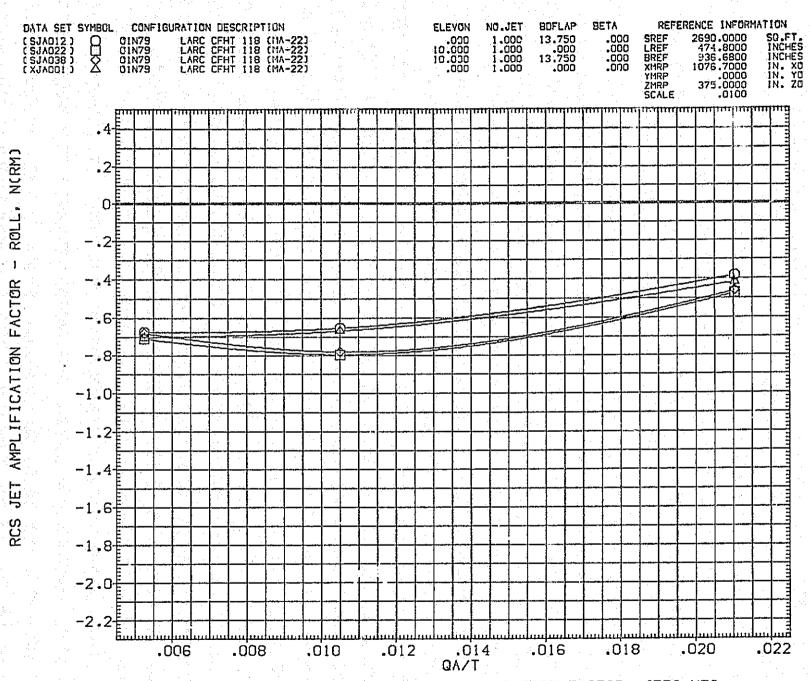


FIGURE 71. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79

(B)ALPHA = .00

PAGE 1231

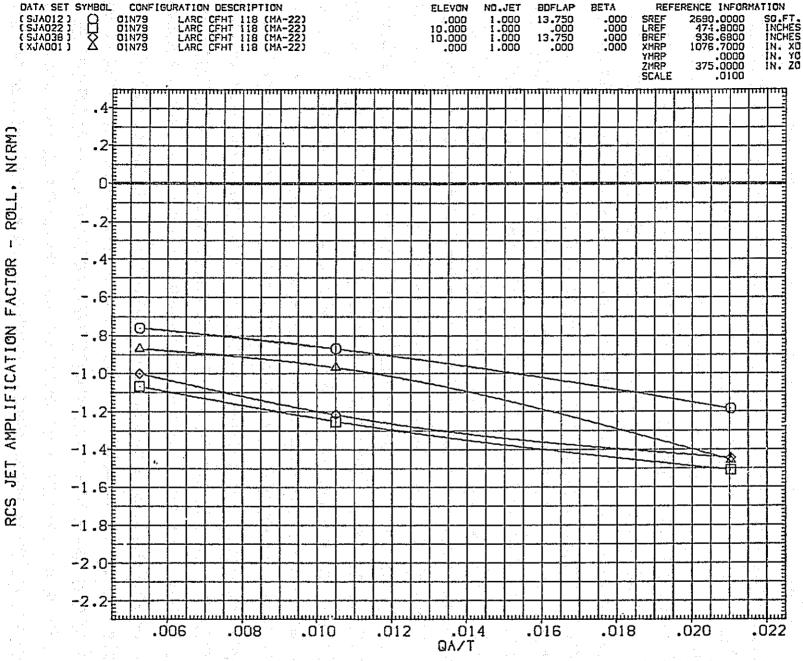


FIGURE 71. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79

(C)ALPHA = 10.00

PAGE 1232

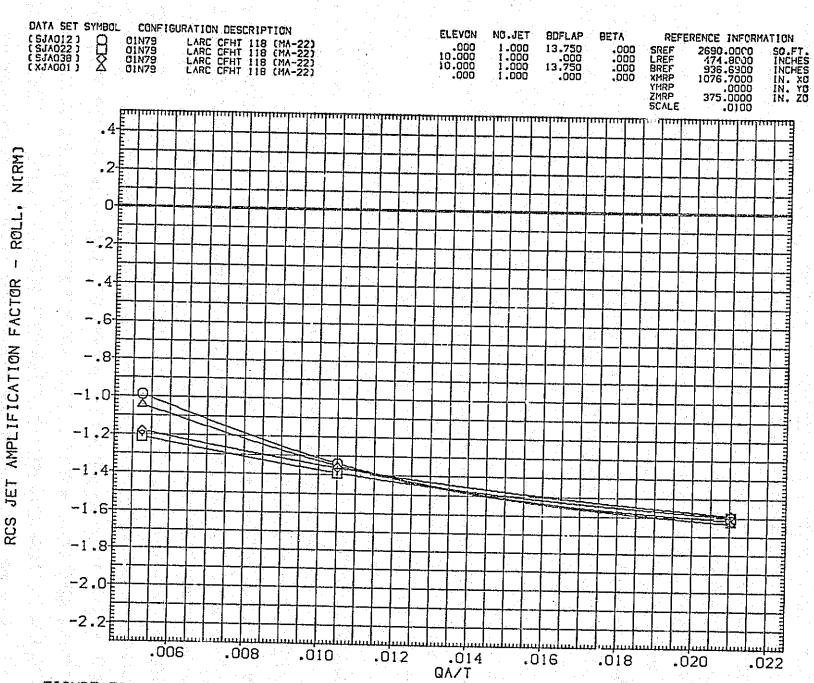


FIGURE 71. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79

CD)ALPHA = 20.00

PAGE 1233

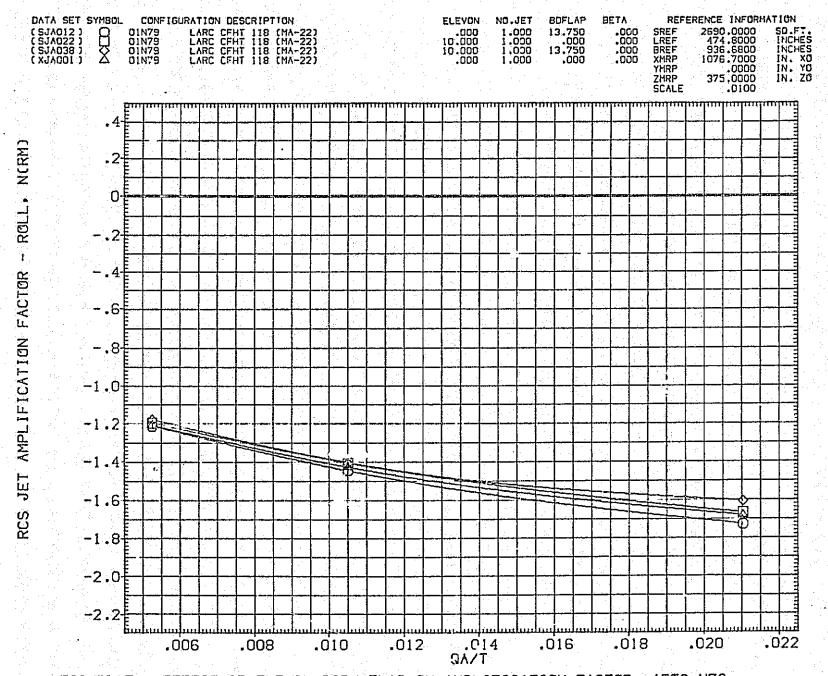


FIGURE 71. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79

(E)ALPHA = 35.00

PAGE 1234

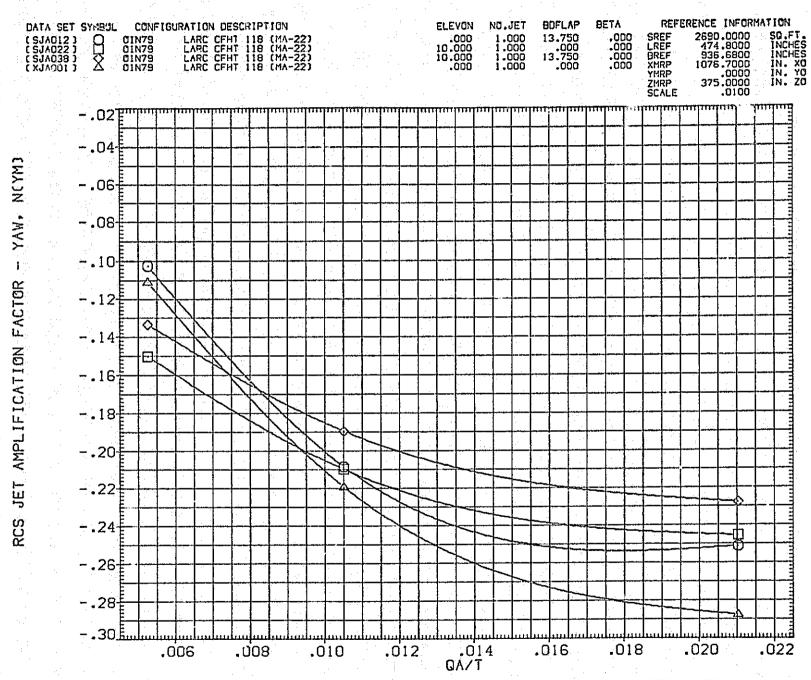


FIGURE 71. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79

[A]ALPHA = -8.00

PAGE 1235

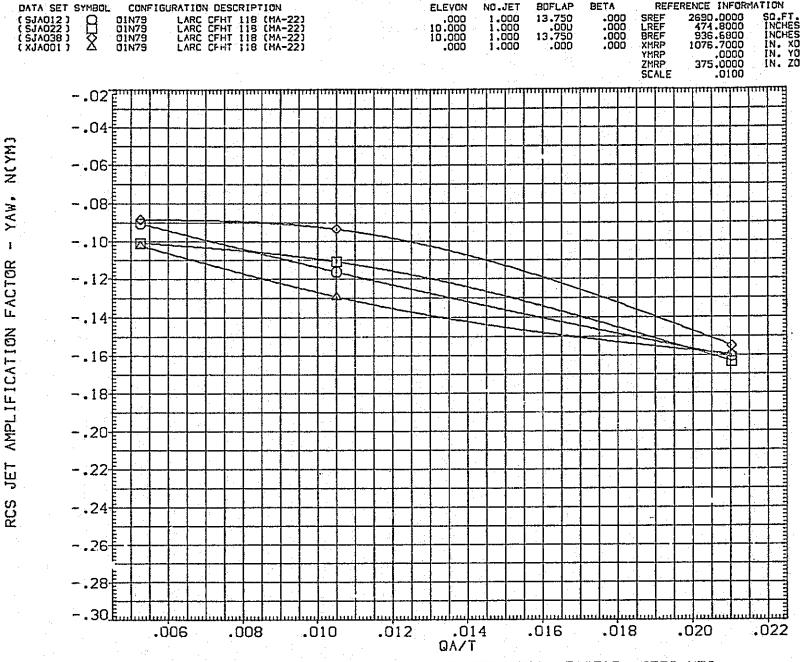


FIGURE 71. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79

(B)ALPHA = .00 PAGE 1236

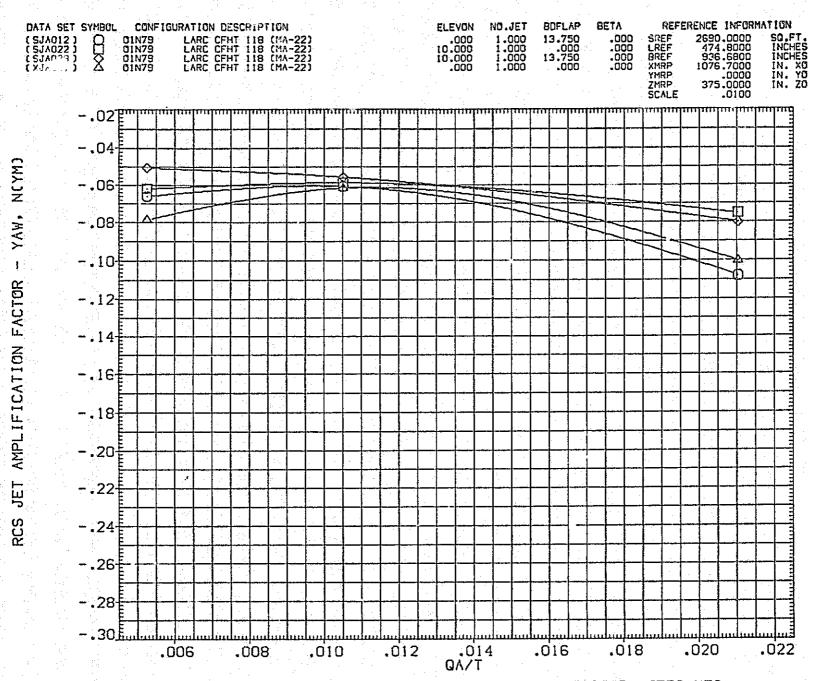


FIGURE 71. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79

(C) ALPHA = 10.00

PAGE 1237

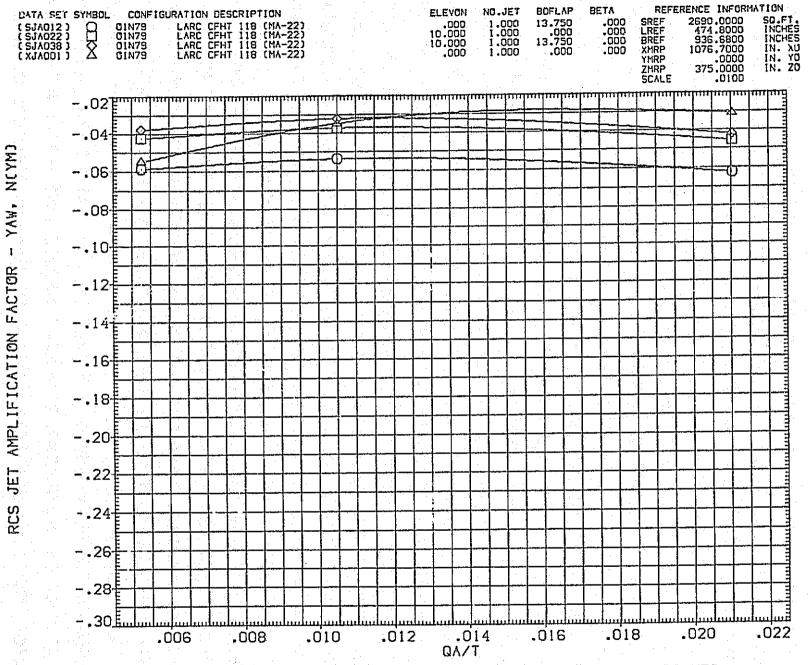


FIGURE 71. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79

CDJALPHA = 20.00

PAGE 1238

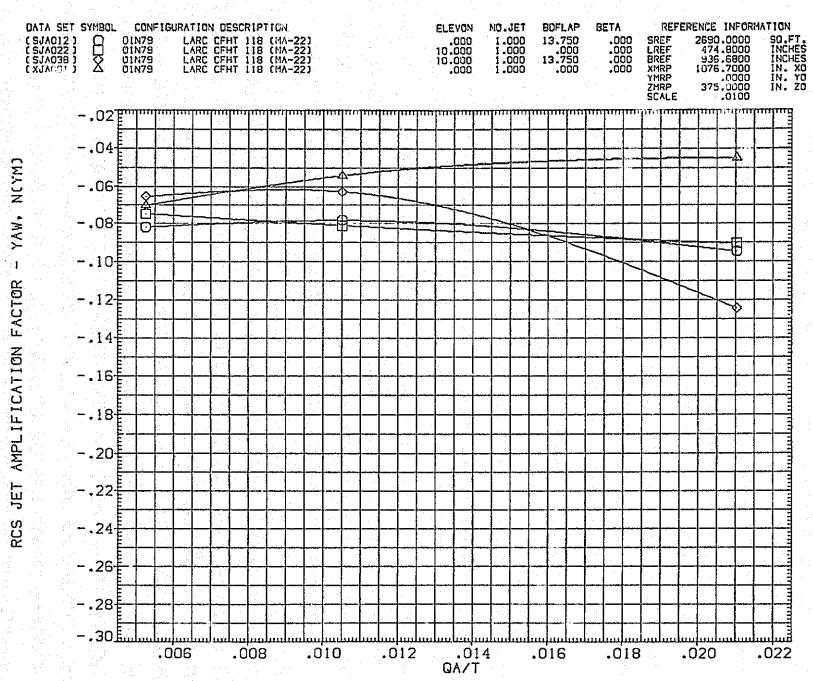


FIGURE 71. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79

(E)ALPHA = 35.00

PAGE 1239

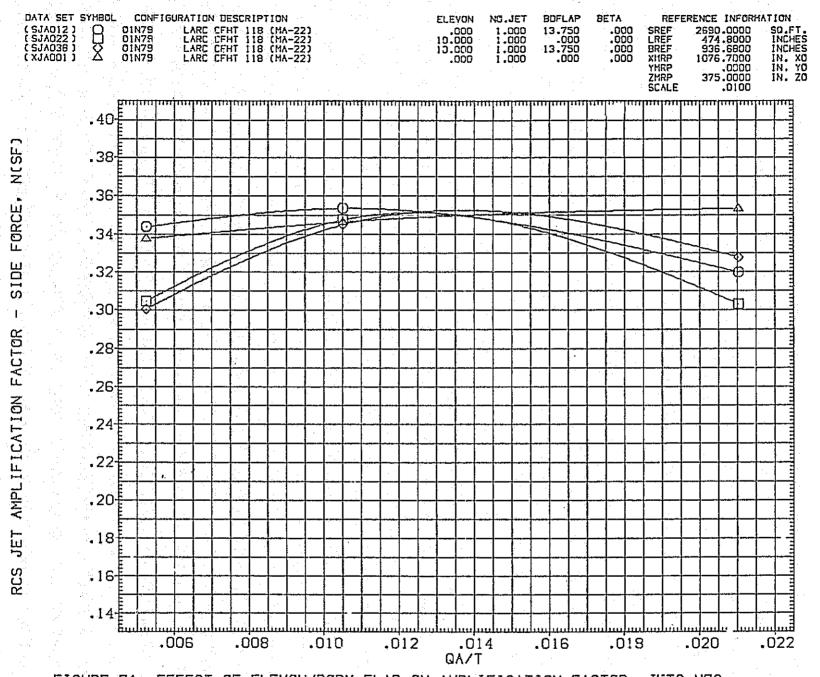


FIGURE 71. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79

(A)ALPHA = -8.00

PAGE 1240



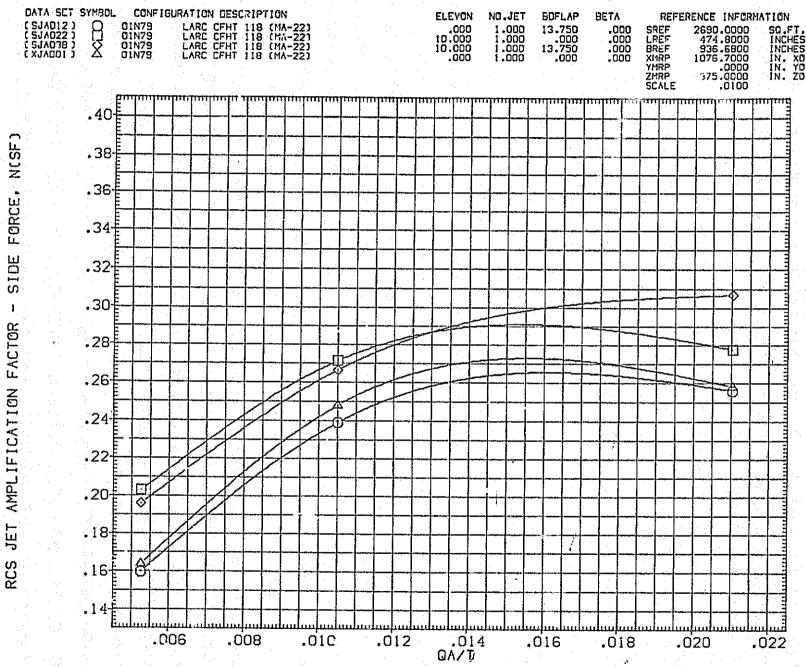


FIGURE 71. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79

(B)ALPHA = .00

PAGE 1241

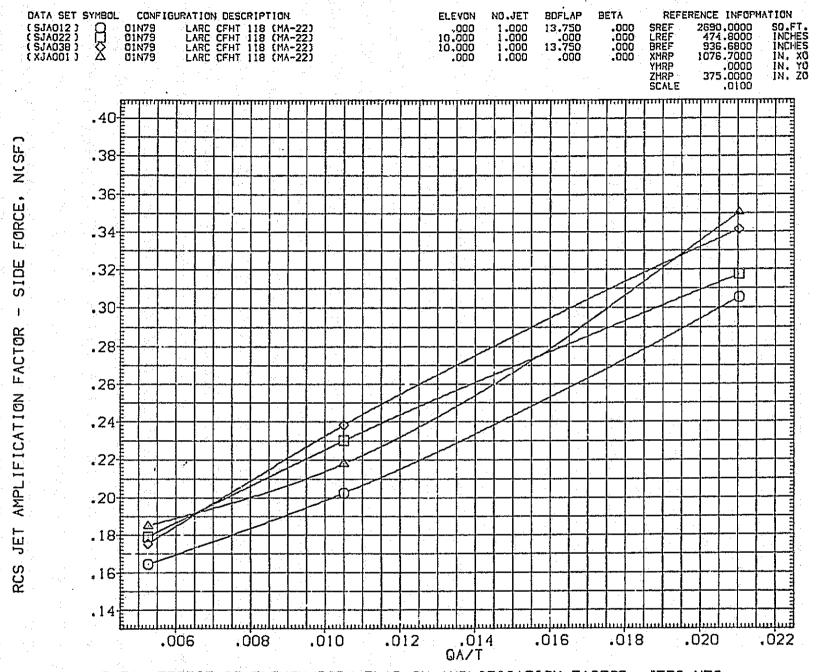


FIGURE 71. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79

(C)ALPHA = 10.00

PAGE 1242

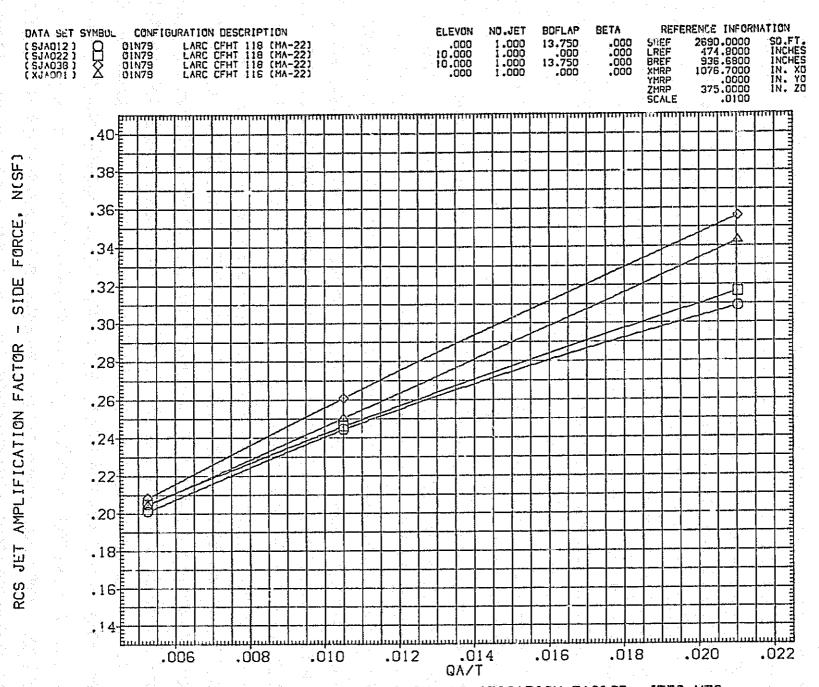


FIGURE 71. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79

[D]ALPHA = 20.00

PAGE 1243

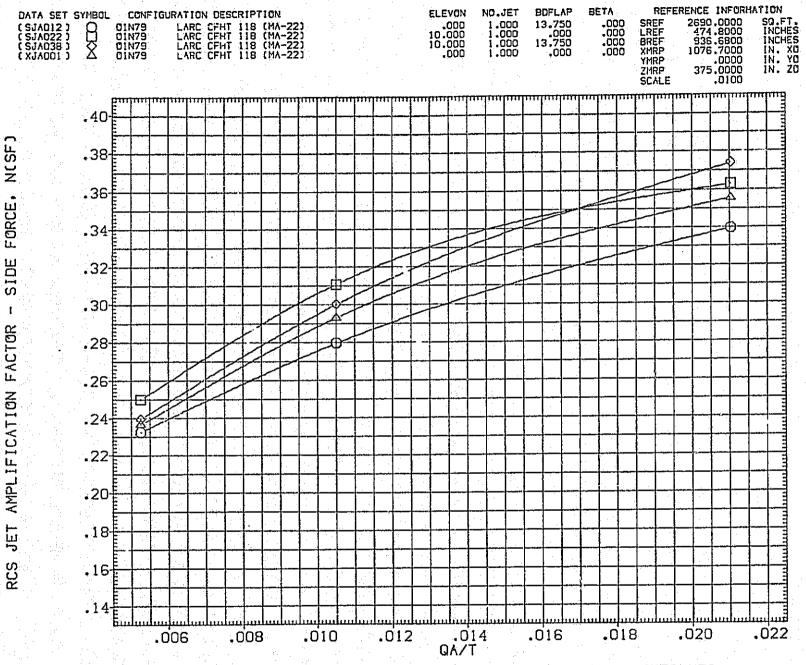


FIGURE 71. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79

CEDALPHA = 35.00

PAGE 1244

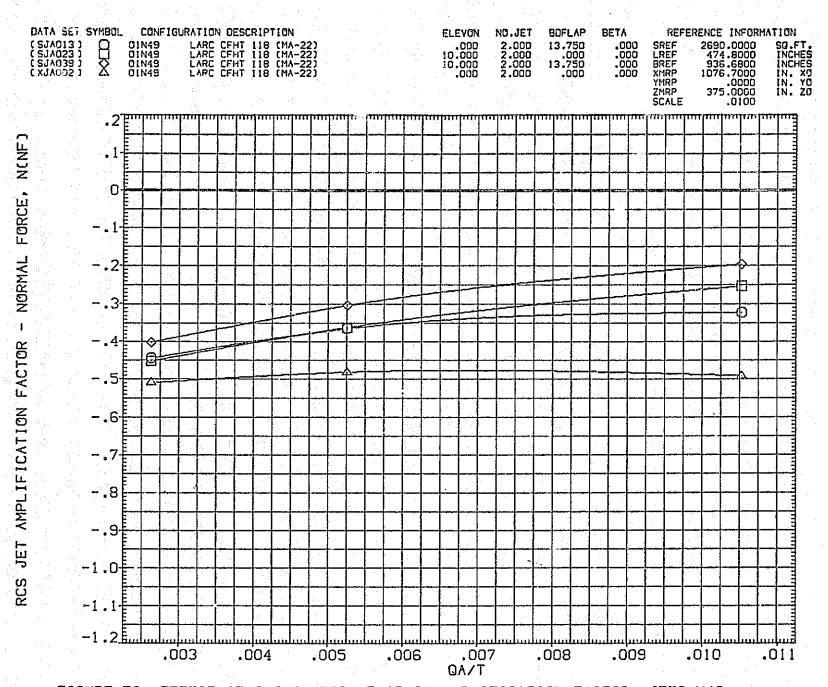
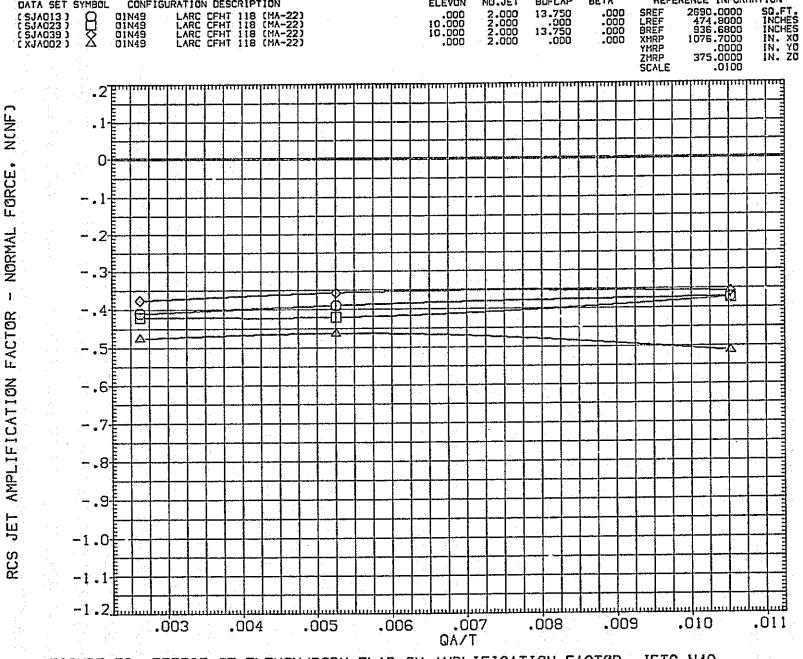


FIGURE 72. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N49

[A]ALPHA = -8.00

PAGE 1245



REFERENCE INFORMATION

BETA

BDFLAP

ELEVON

NO.JET

FIGURE 72. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N49 1246 PAGE (B)ALPHA = .00

DATA SET SYMBOL

CONFIGURATION DESCRIPTION



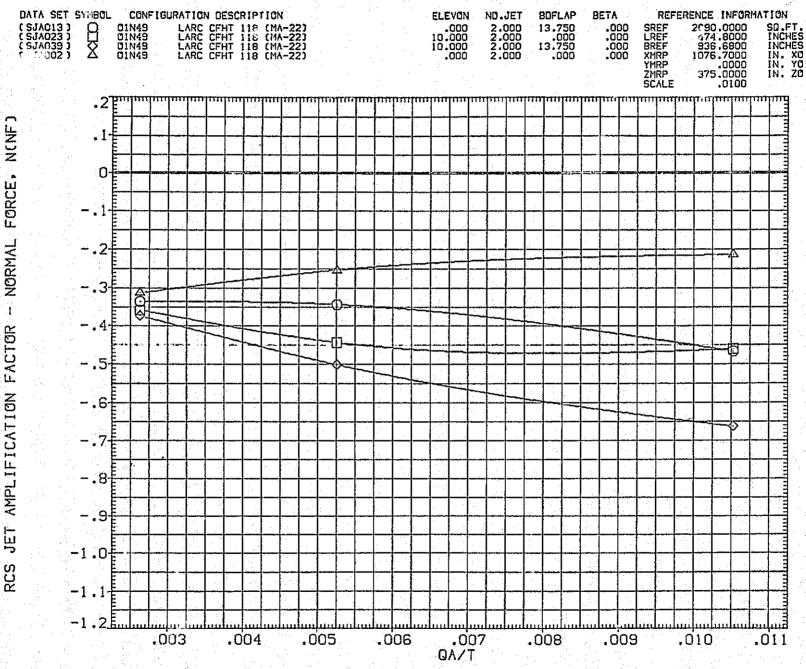


FIGURE 72. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N49

(C)ALPHA = 10.00

PAGE

1247

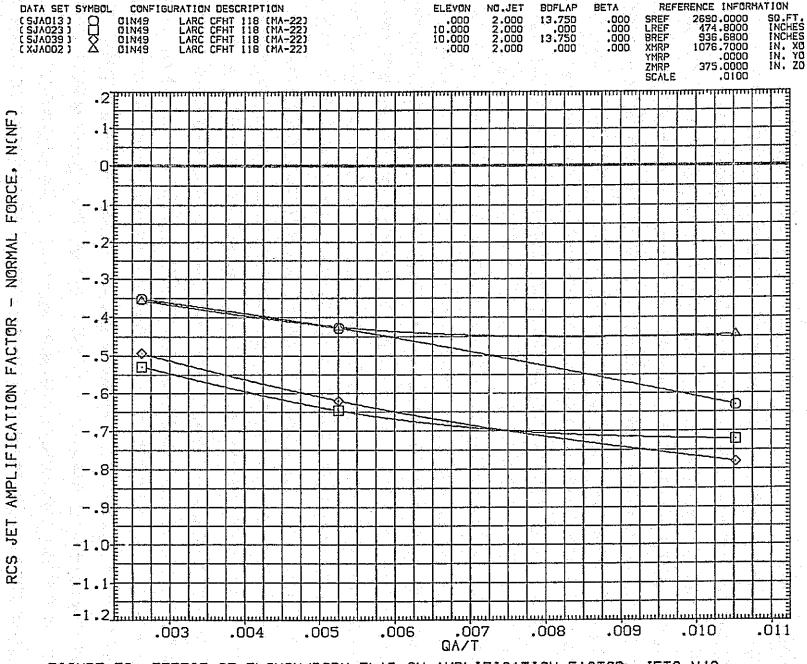


FIGURE 72. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N49

(D)ALPHA = 20.00 PAGE 1248

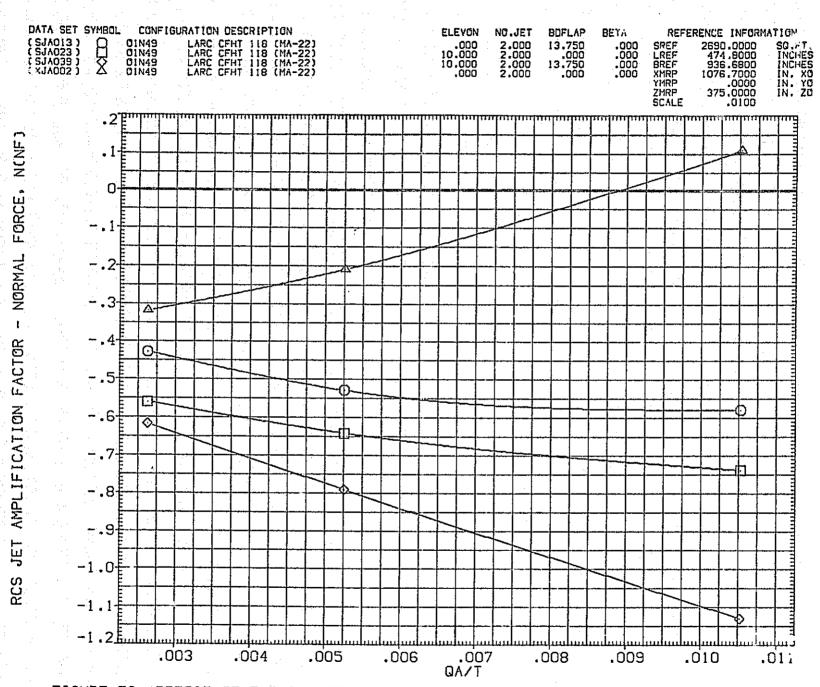


FIGURE 72. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N49

(E)ALPHA = 35.00

PAGE 1249

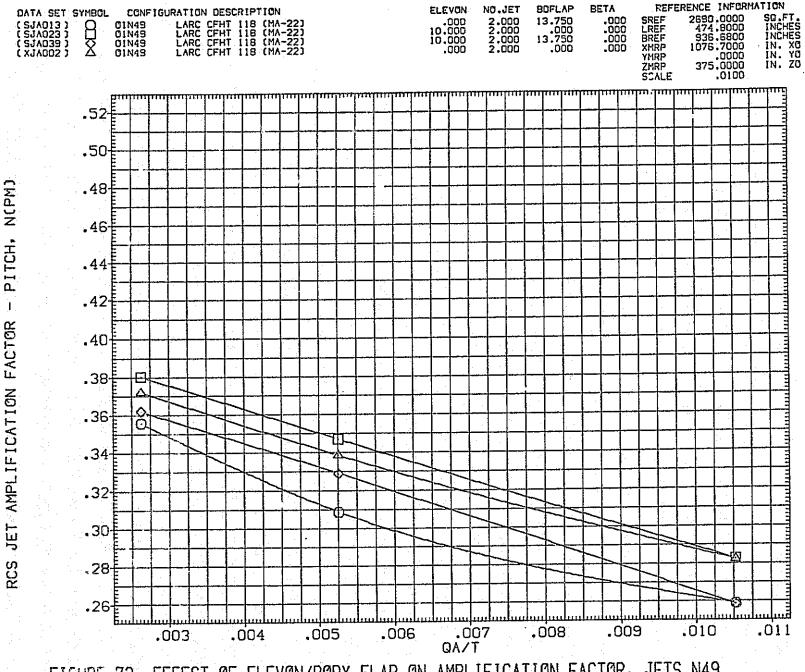


FIGURE 72. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N49

[A]ALPHA = -8.00

PAGE 1250

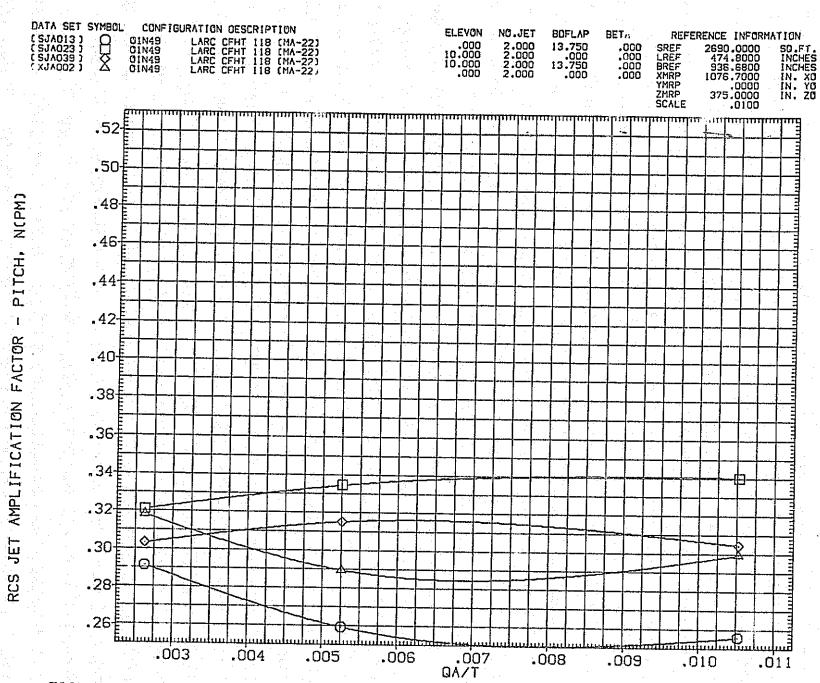


FIGURE 72. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N49

(B)ALPHA = .00

PAGE 1251

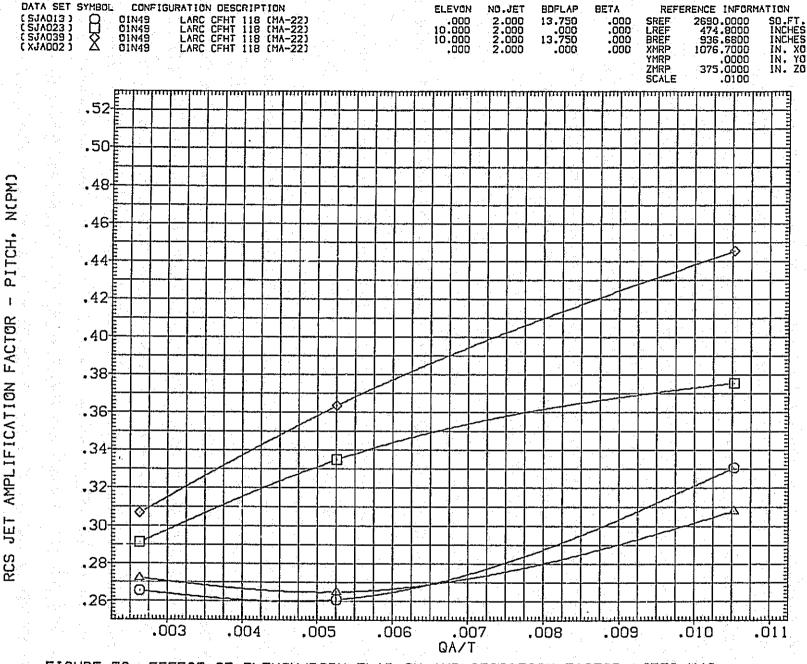


FIGURE 72. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N49

CC)ALPHA = 10.00

PAGE 1252

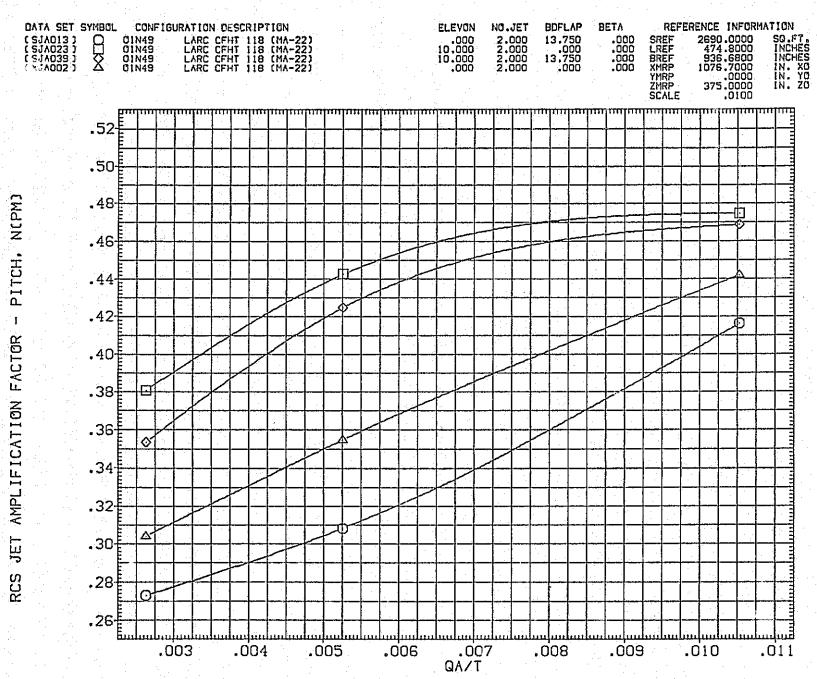


FIGURE 72. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N49

[D]ALPHA = 20.00 PAGE 1253

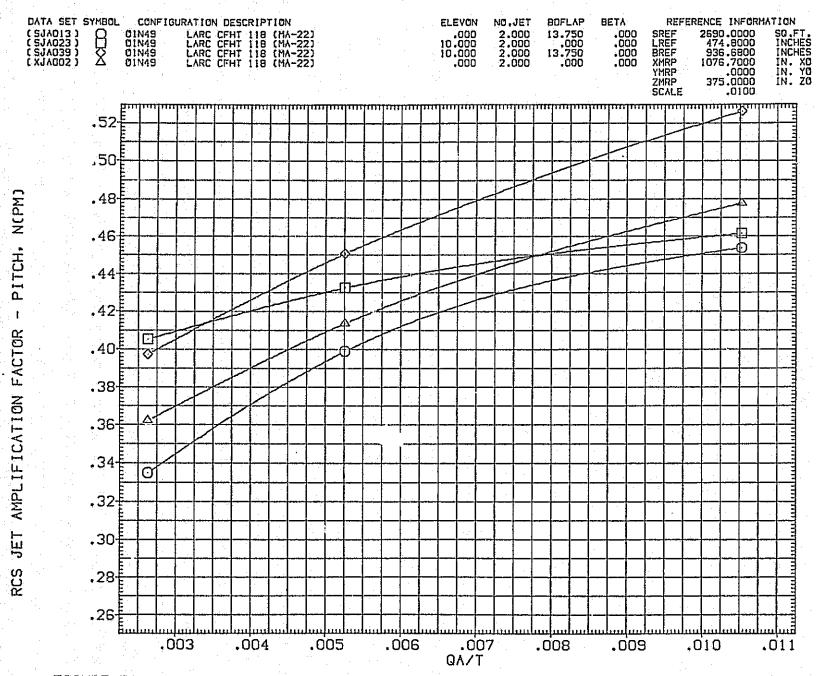


FIGURE 72. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N49

(E)ALPHA = 35.00

PAGE 1254

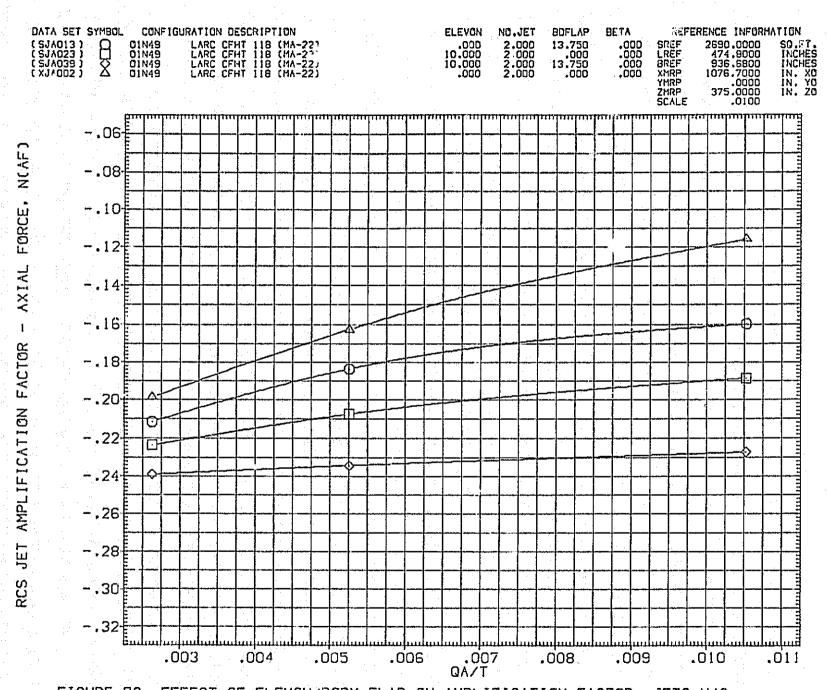


FIGURE 72. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N49

[A]ALPHA = -8.00

PAGE 1255

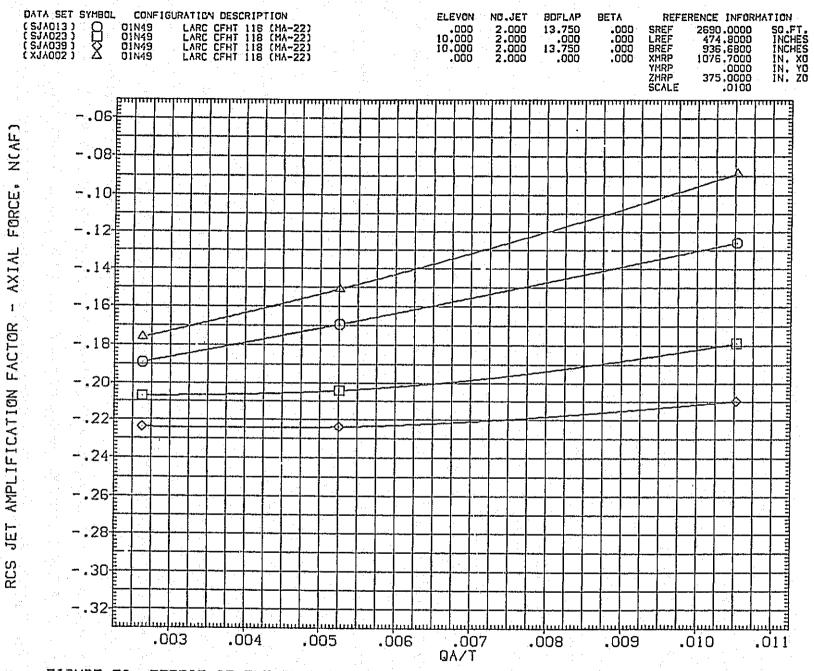


FIGURE 72. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N49

(B)ALPHA = .00

PAGE 1256

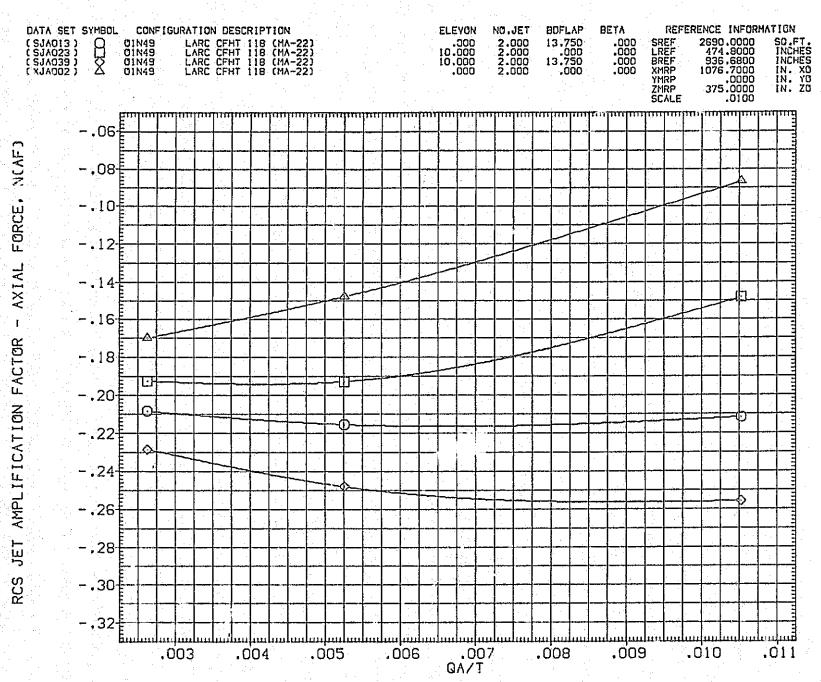


FIGURE 72. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N49

(C)ALPHA = 10.00

PAGE 1257

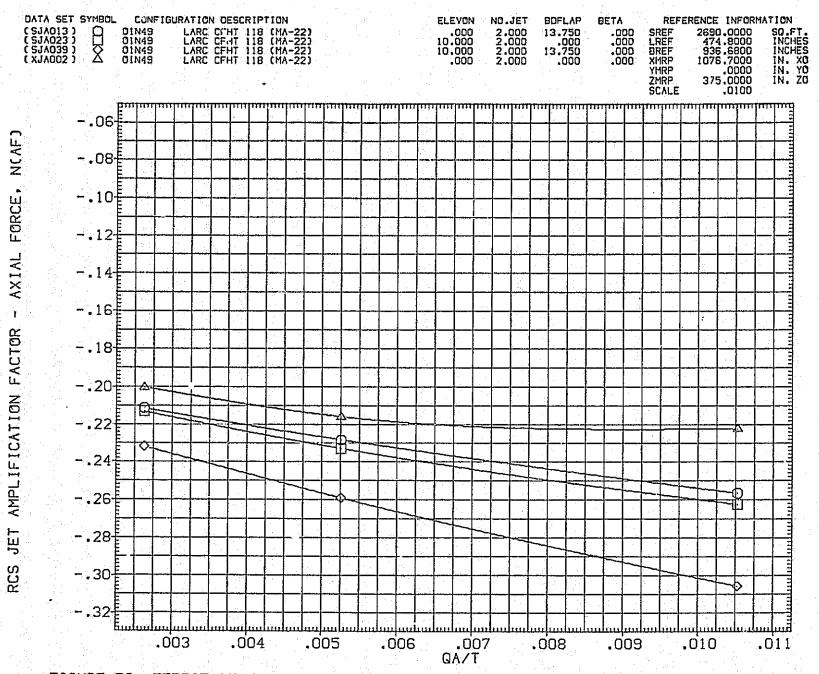


FIGURE 72. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N49

(D)ALPHA = 20.00

PAGE 1258

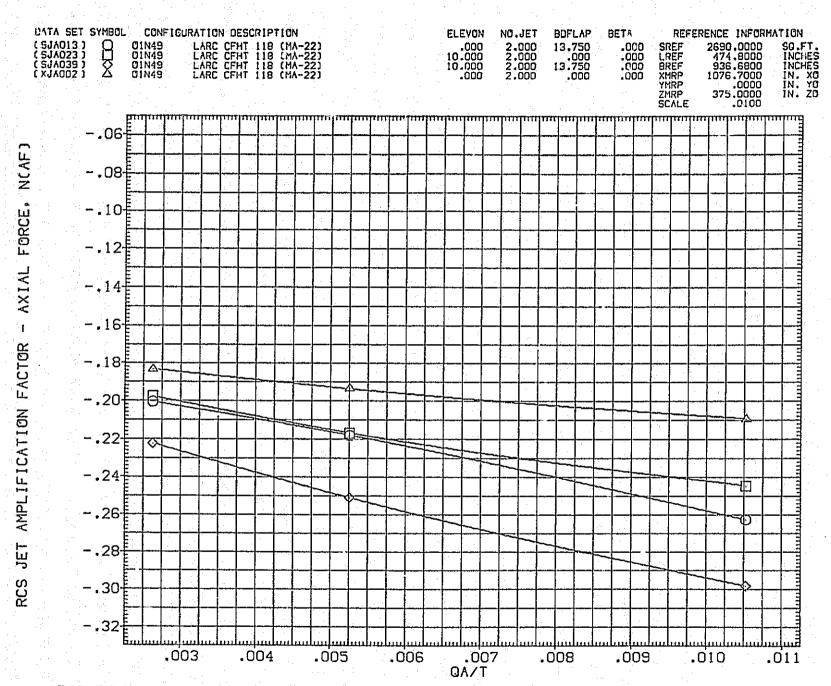


FIGURE 72. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N49

(E)ALPHA = 35.00

PAGE 1259

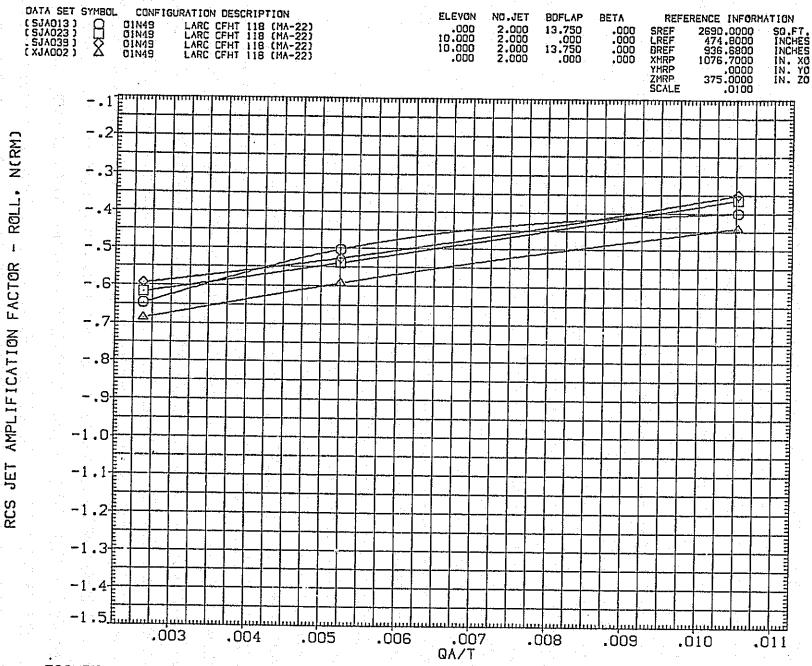


FIGURE 72. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N49

[A]ALPHA = -8.00

PAGE 1260

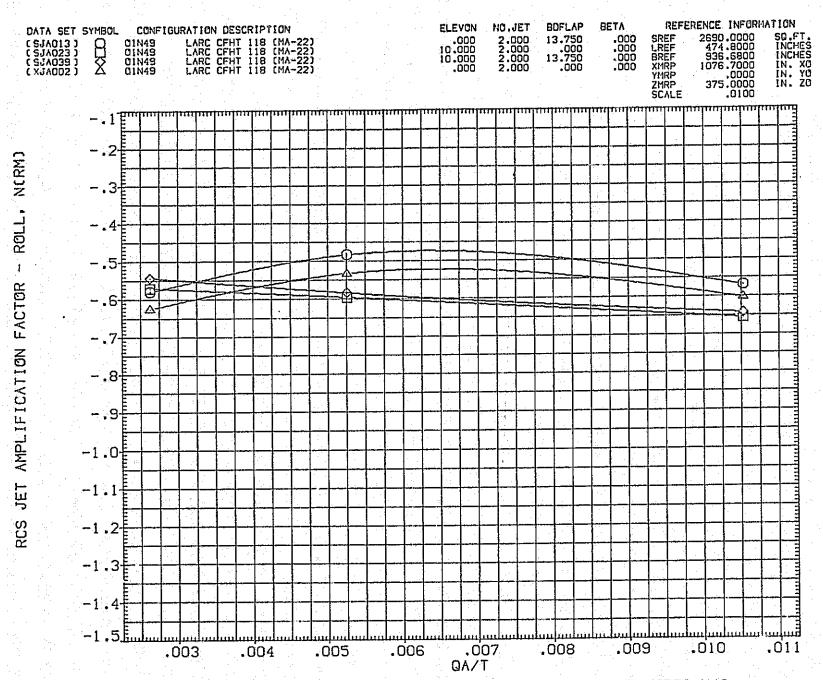


FIGURE 72. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N49

(B)ALPHA = .00

PAGE 1261

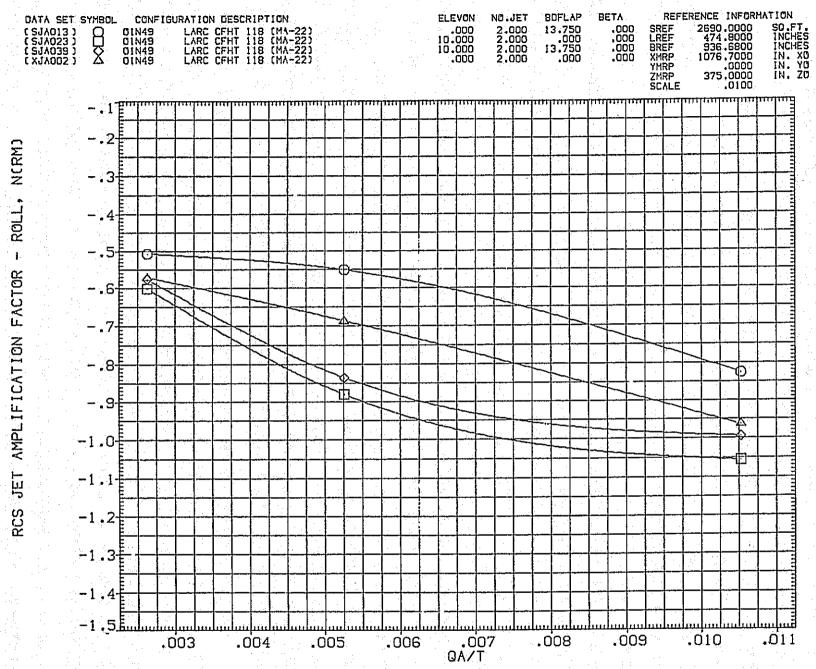


FIGURE 72. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N49

(C)ALPHA = 10.00

PAGE 1262

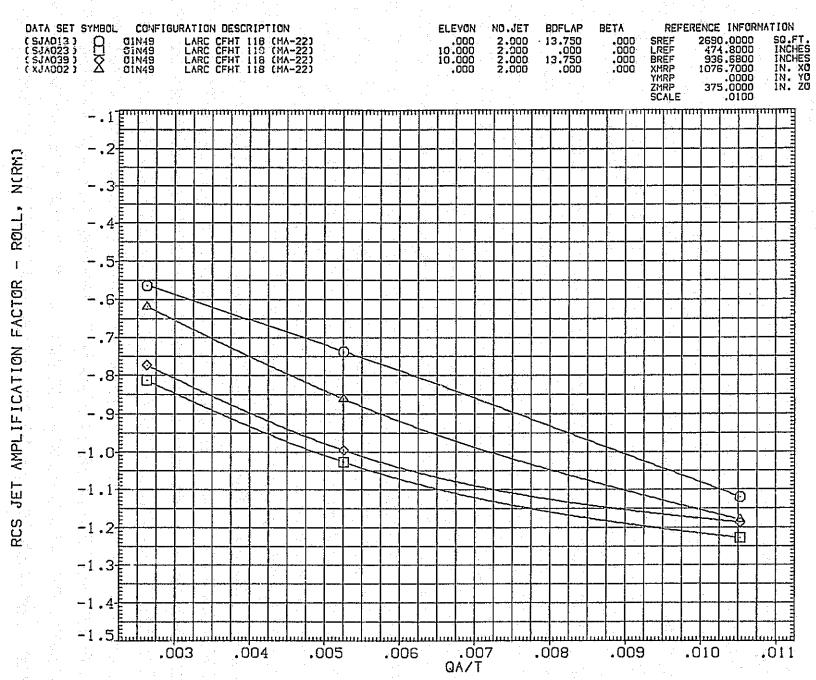


FIGURE 72. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N49

[D]ALPHA = 20.00 PAGE 1263

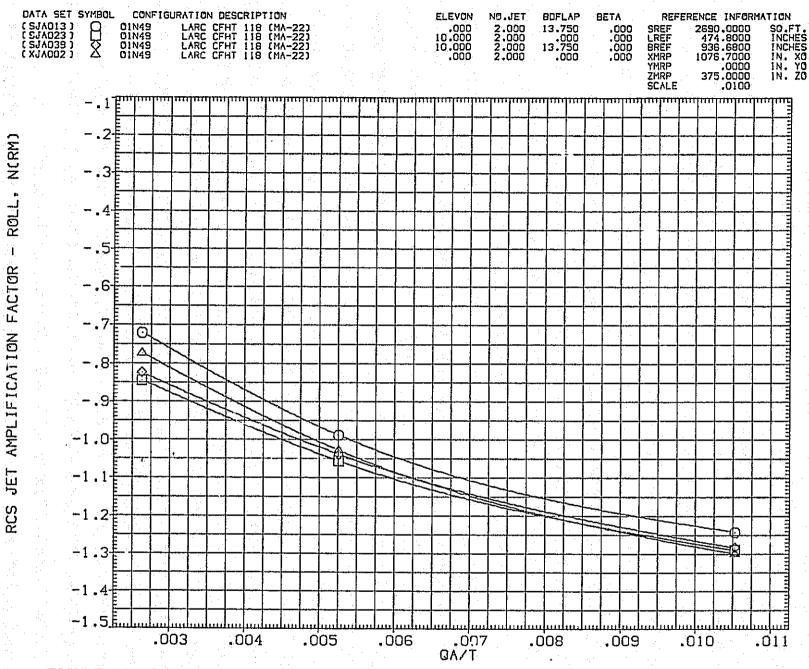
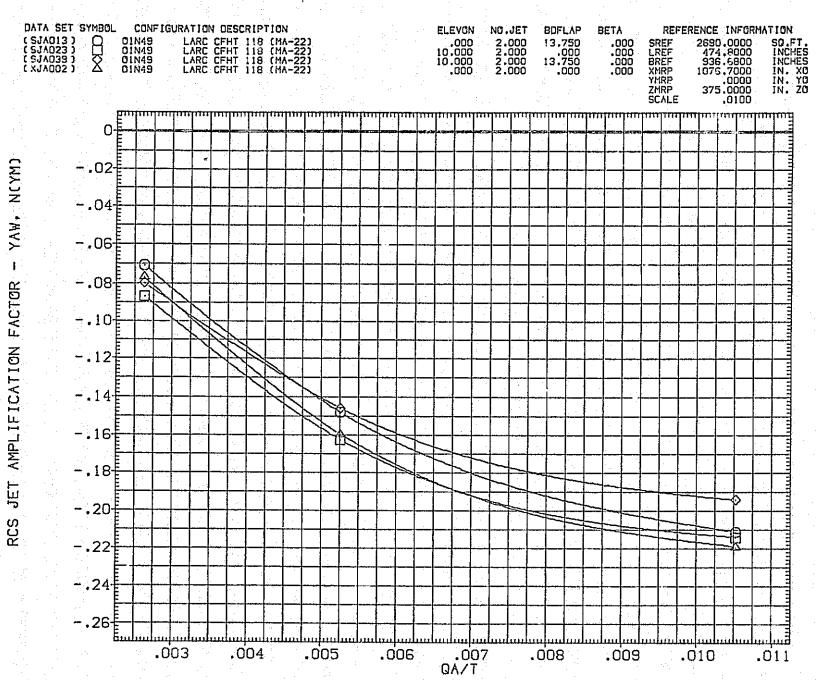


FIGURE 72. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N49

(E)ALPHA = 35.00

PAGE 1264



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FIGURE 72. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N49

(A)ALPHA = -8.00

PAGE

1265

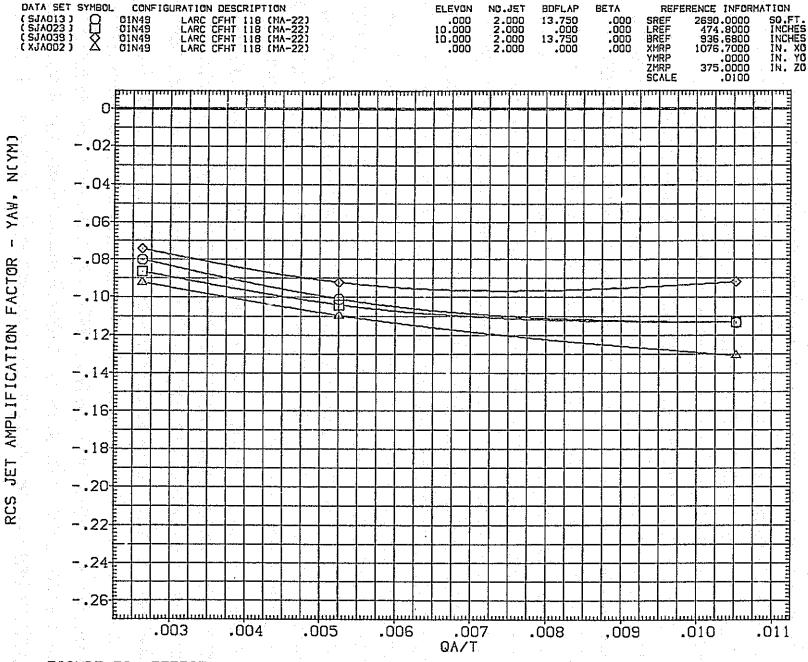


FIGURE 72. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N49

(B)ALPHA = .00

PAGE 1266

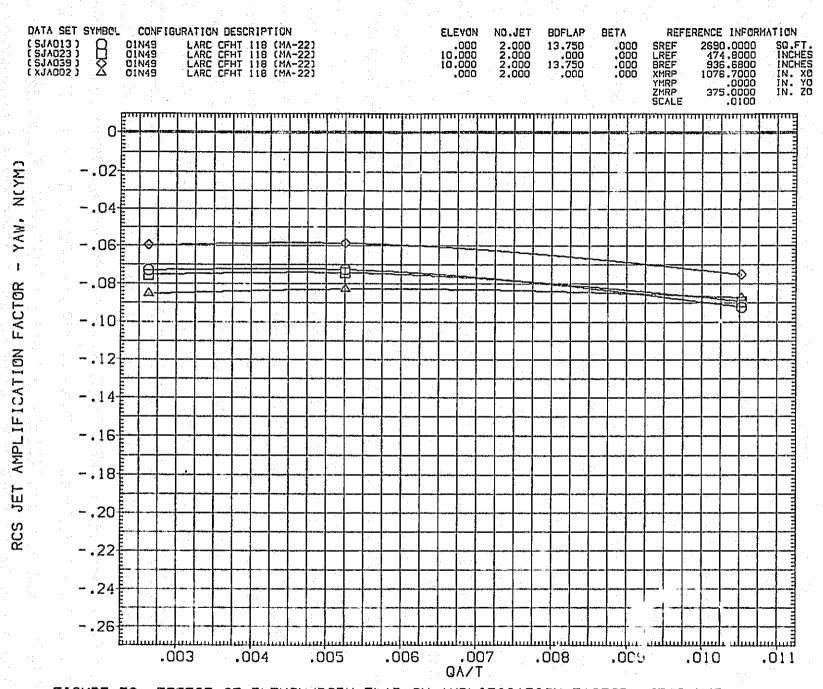


FIGURE 72. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JEIS N49

(C)ALPHA = 10.00 PAGE 1267

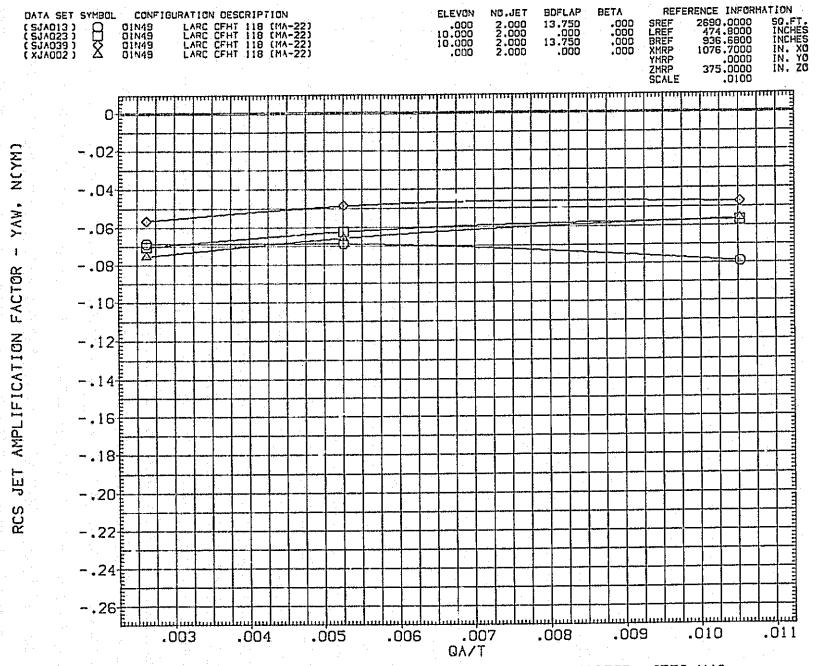


FIGURE 72. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N49

CDJALPHA = 20.00

PAGE 1.268

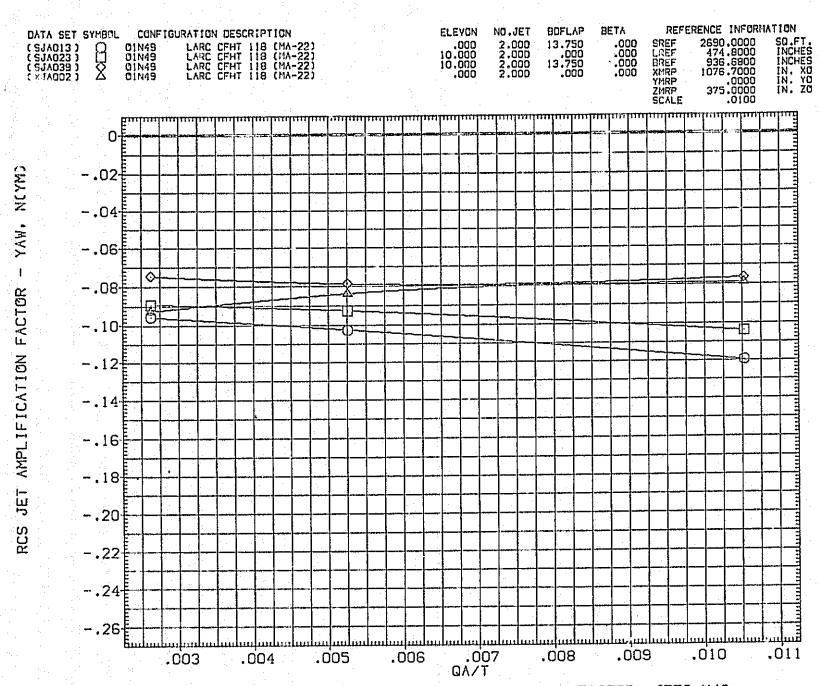


FIGURE 72. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N49

(E)ALPHA = 35.00

PAGE 1269

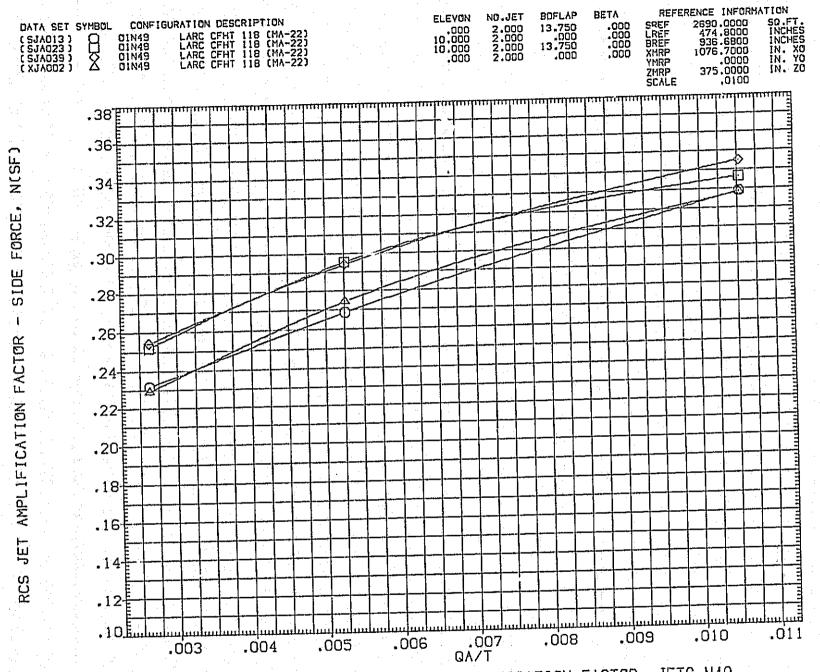


FIGURE 72. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N49

PAGE 1270



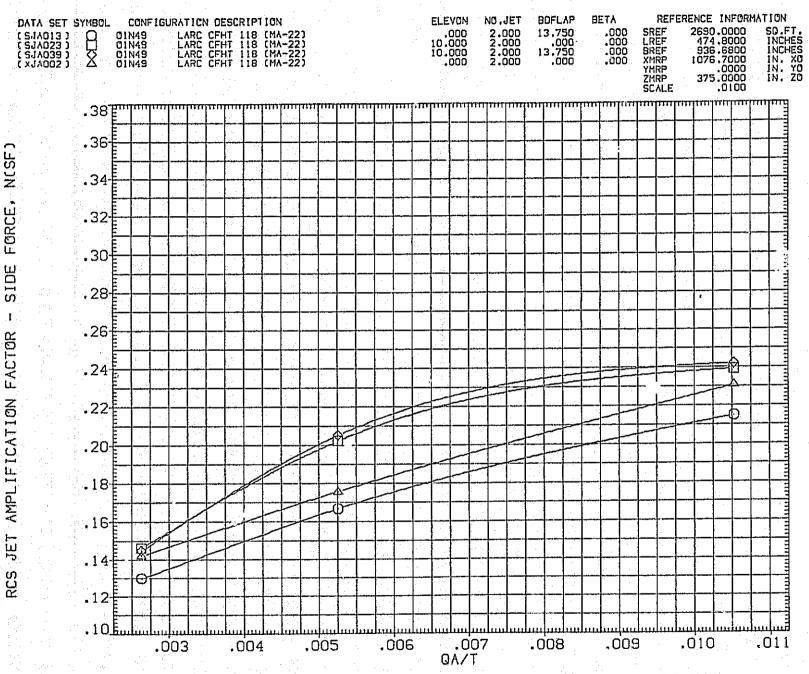


FIGURE 72. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N49

(B) ALPHA = .00

PAGE 1271

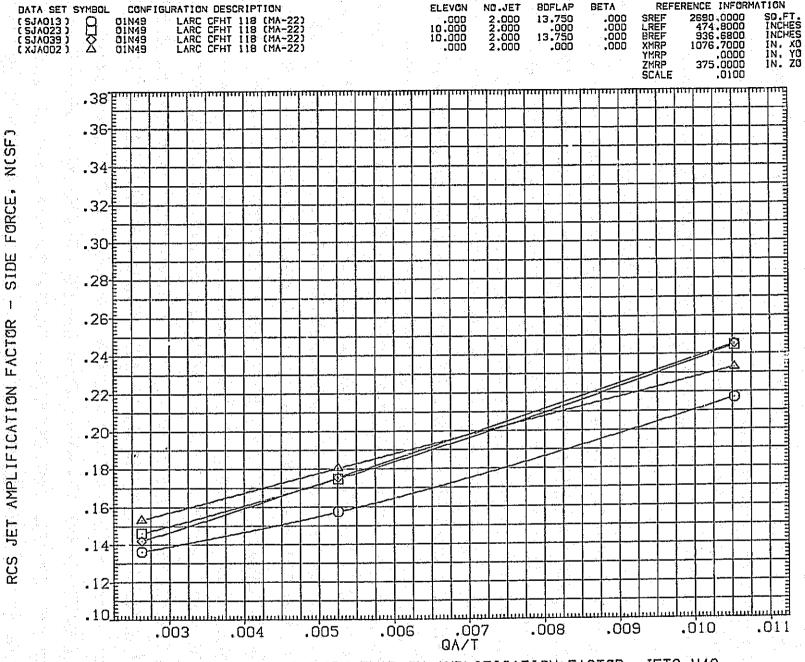


FIGURE 72. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N49

(C)ALPHA = 10.00

PAGE 1272

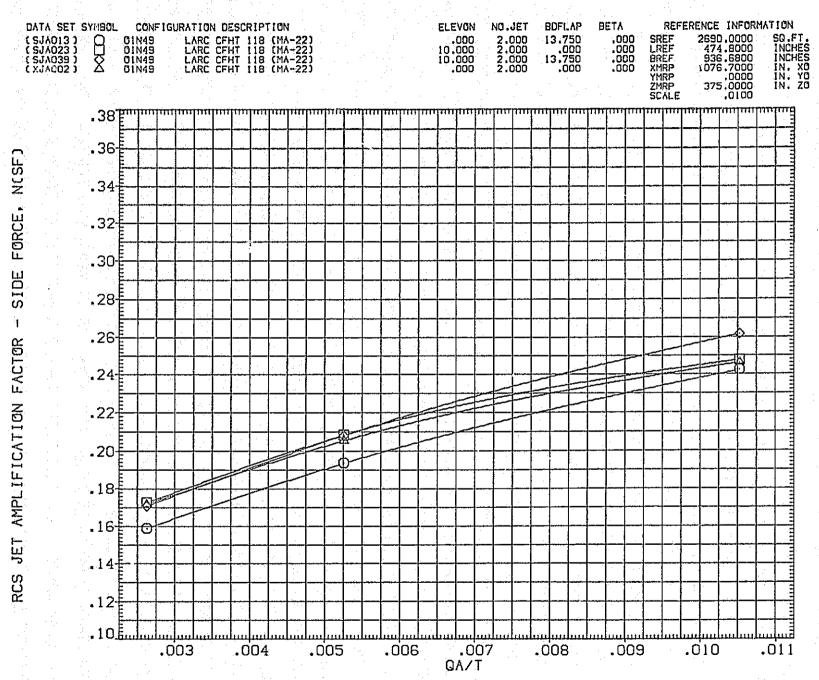


FIGURE 72. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N49

(D)ALPHA = 20.00

PAGE

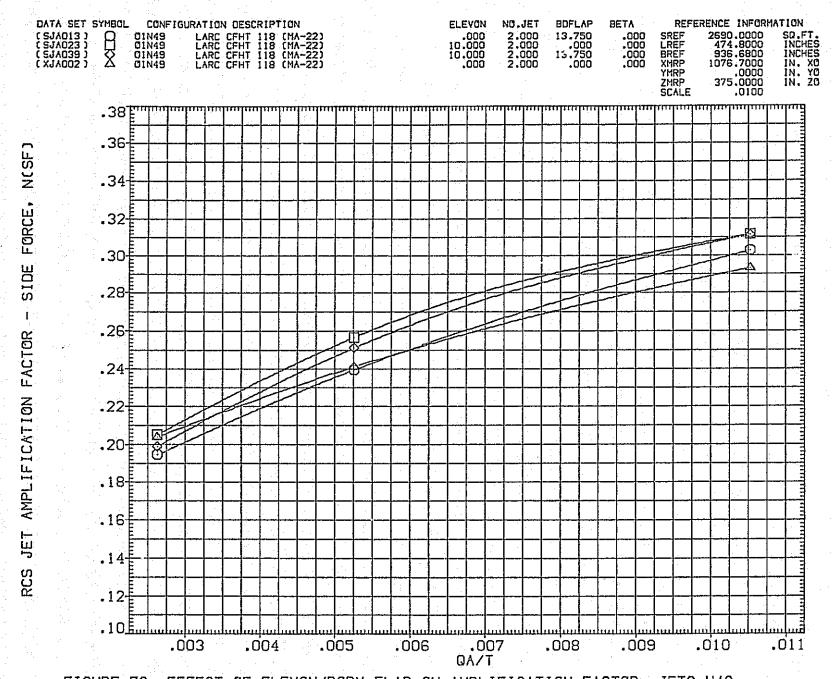


FIGURE 72. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N49

(E)ALPHA = 35.00

PAGE 1274

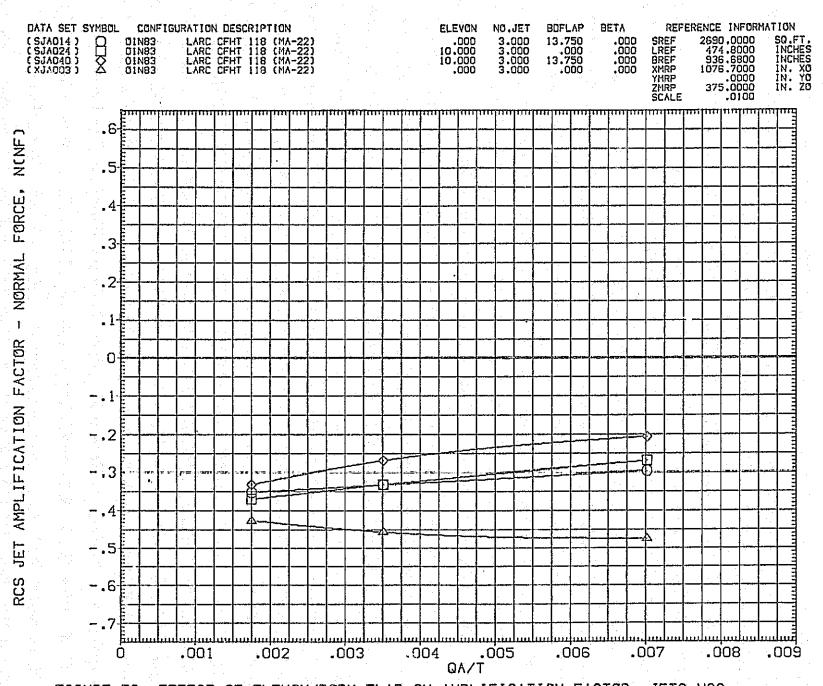


FIGURE 73. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N83

[A]ALPHA = -8.00

PAGE 1275

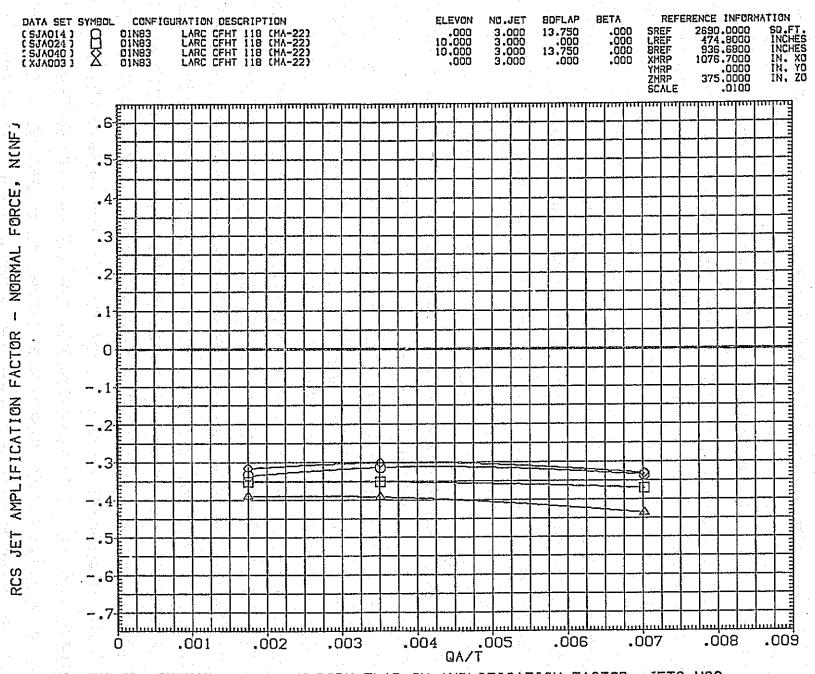


FIGURE 73. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N83

(B)ALPHA = .00

PAGE 1276

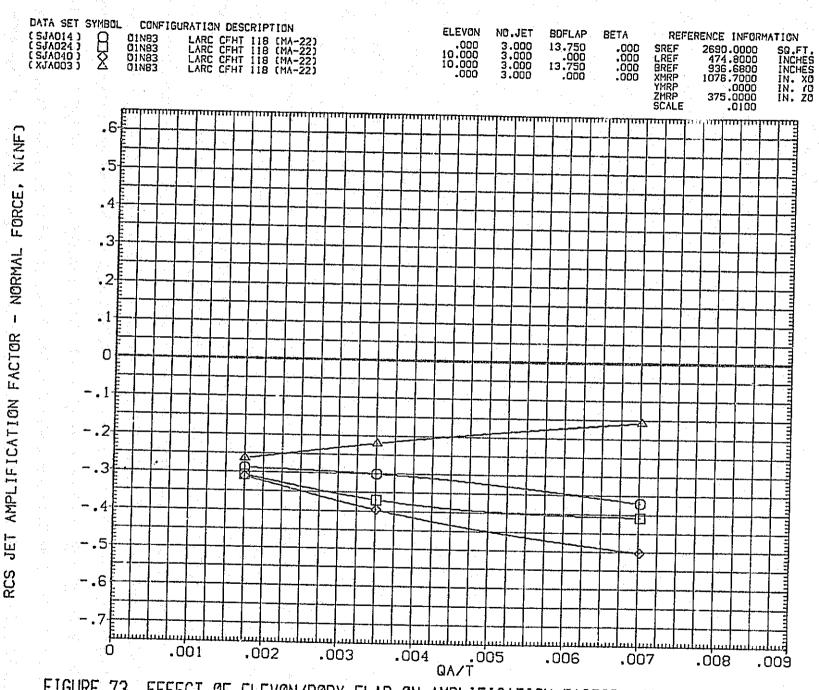


FIGURE 73. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N83
(C)ALPHA = 10.00

PAGE

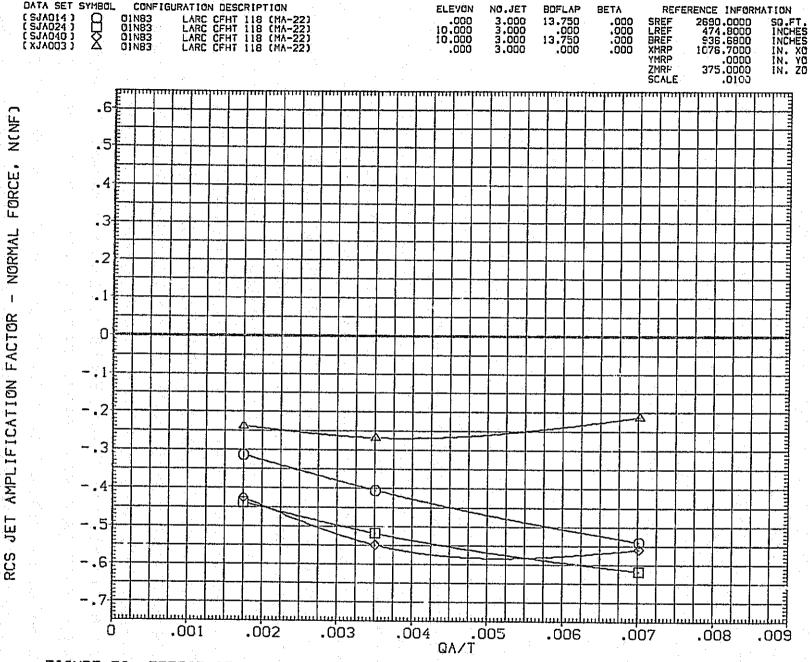


FIGURE 73. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N83

CD)ALPHA = 20.00

PAGE 1278

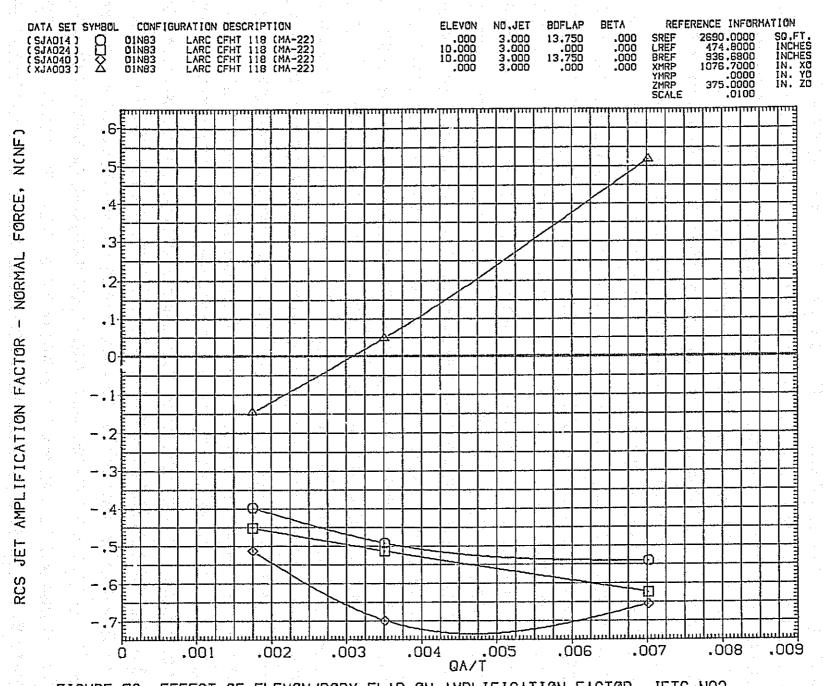


FIGURE 73. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N83

(E)ALPHA = 35.00

PAGE 1279

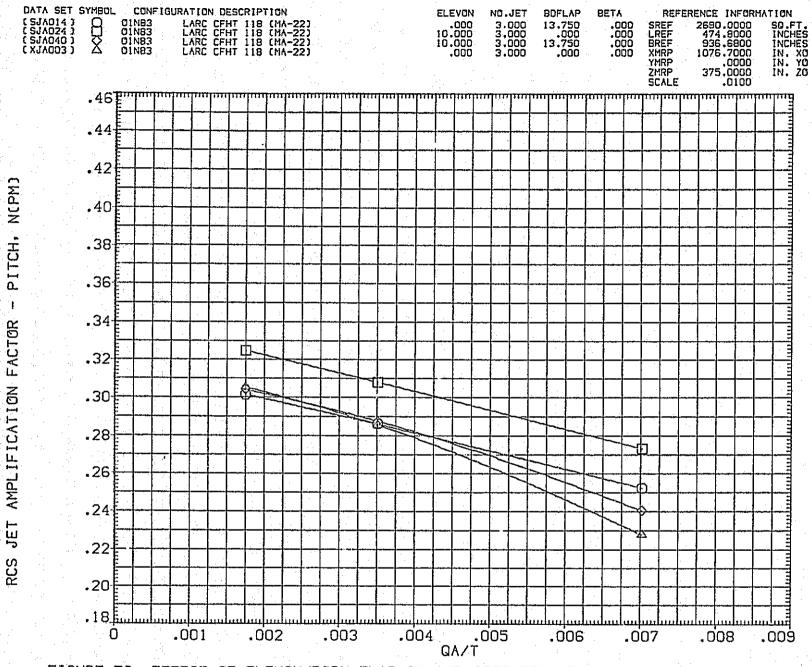
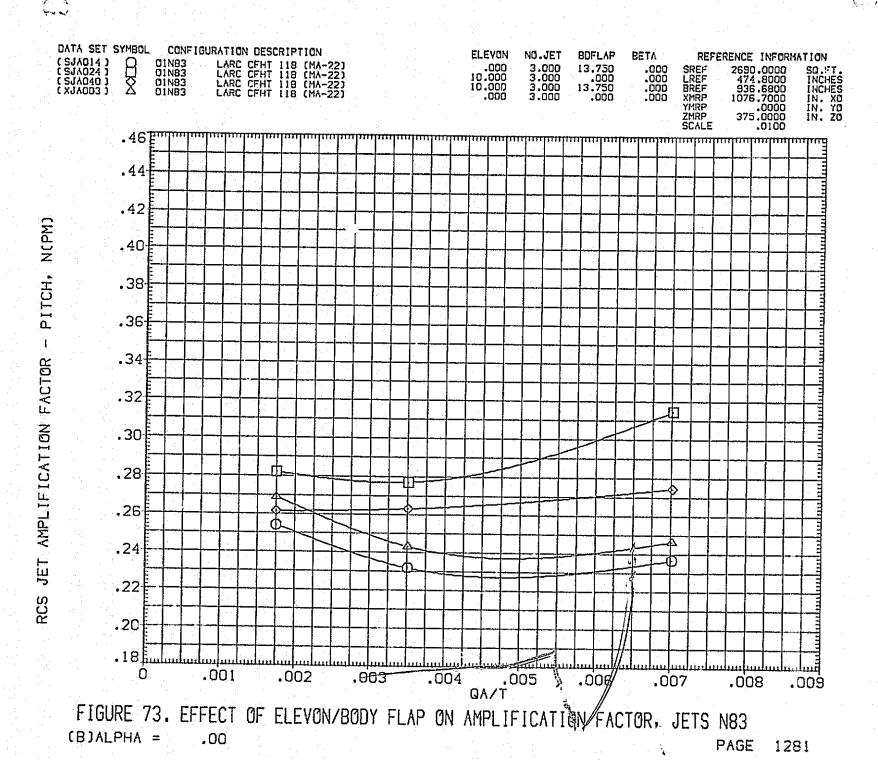


FIGURE 73. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N83

(A)ALPHA = -8.00

PAGE 1280

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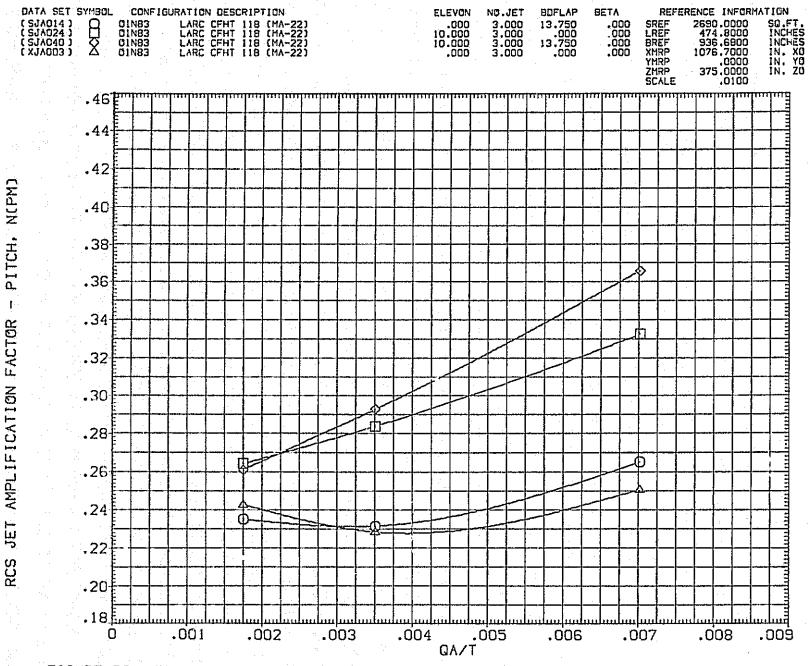


FIGURE 73. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N83

(C)ALPHA = 10.00 PAGE 1282

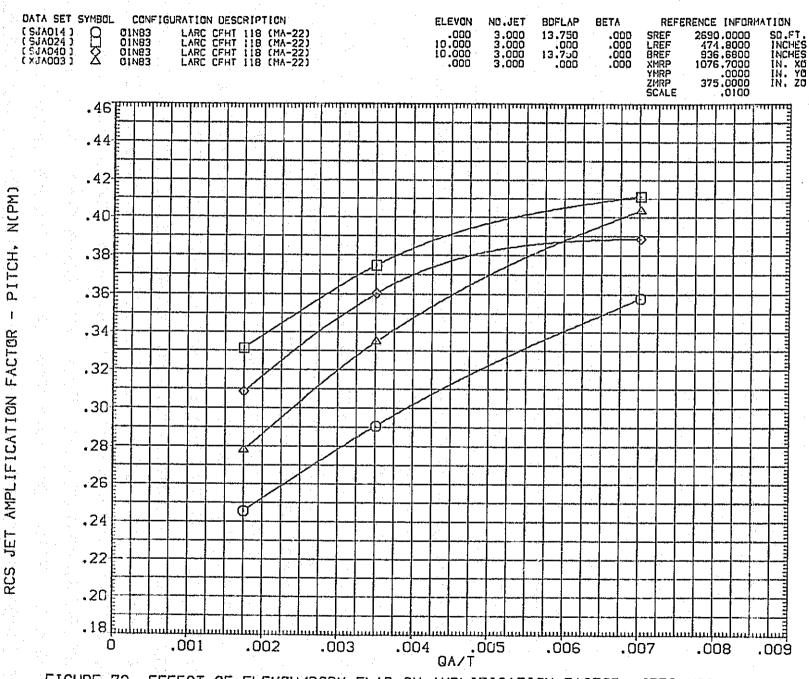


FIGURE 73. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N83

CD)ALPHA = 20.00

PAGE 1283

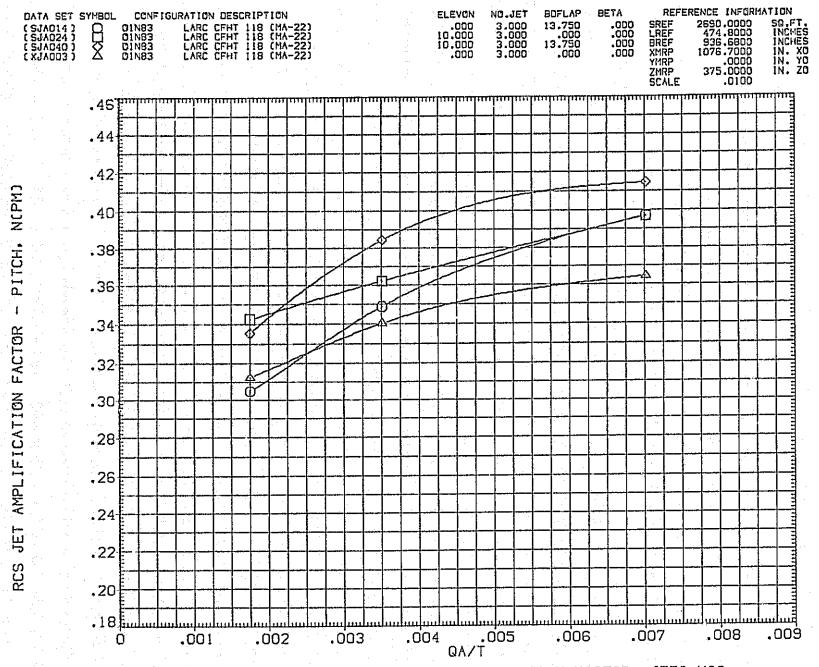


FIGURE 73. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N83

(E)ALPHA = 35.00

PAGE 1284

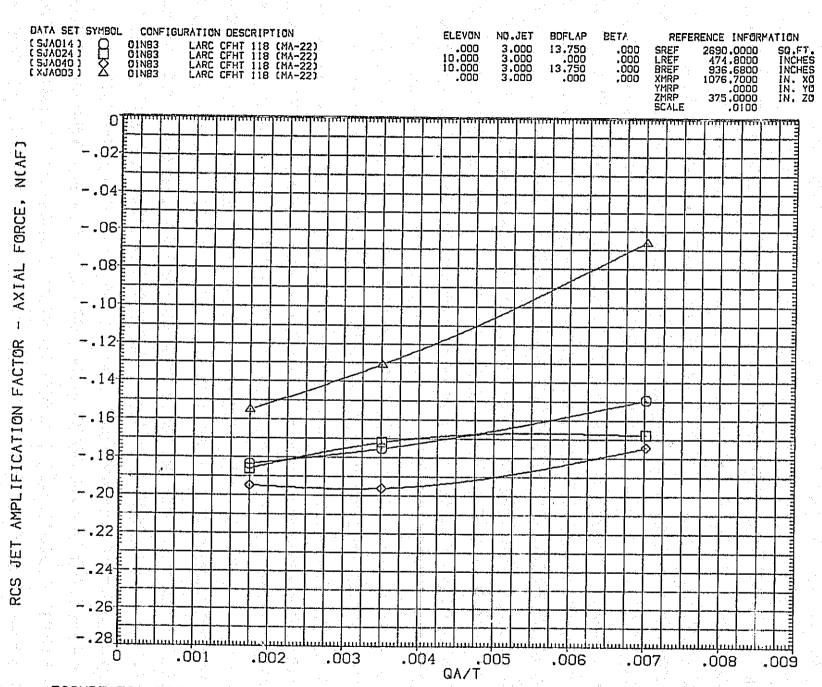


FIGURE 73. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N83

[A)ALPHA = -8.00

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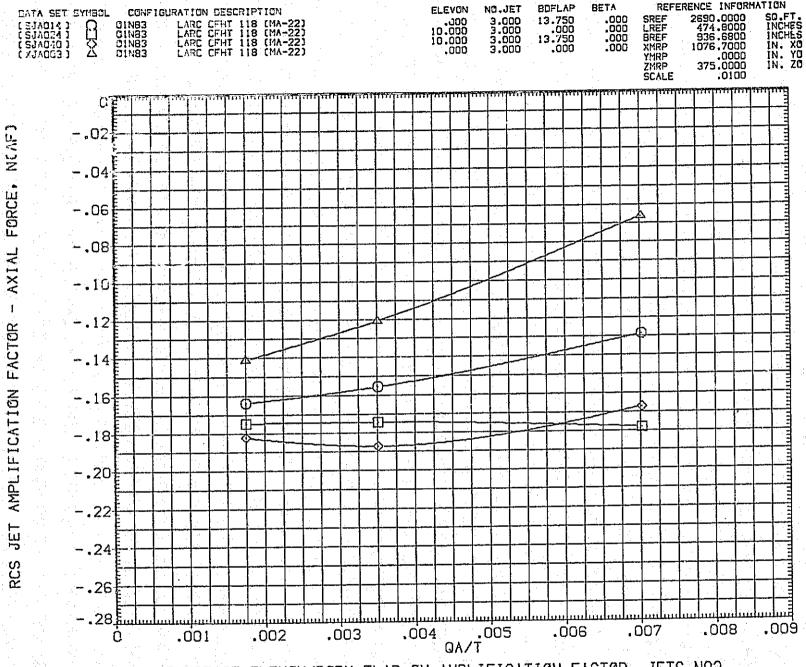


FIGURE 73. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N83

(B) ALPHA = .00

PAGE 1286

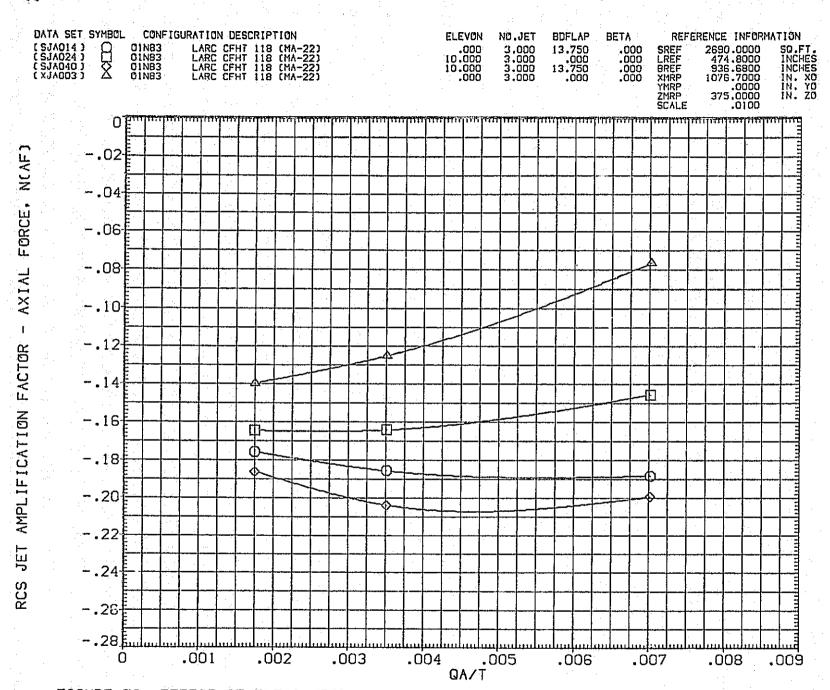


FIGURE 73. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N83

(C)ALPHA = 10.00 PAGE 1287

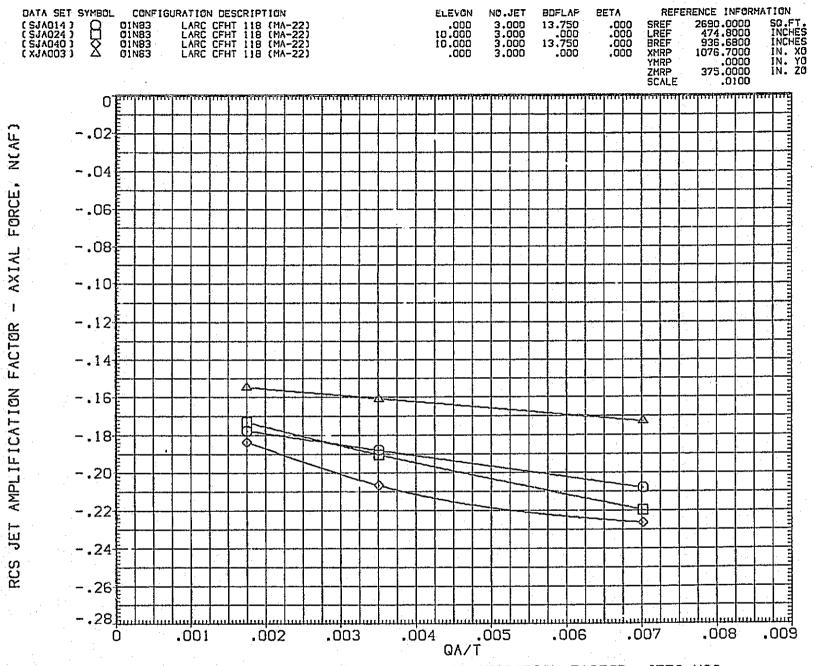


FIGURE 73. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N83

(D)ALPHA = 20.00 PAGE 1288

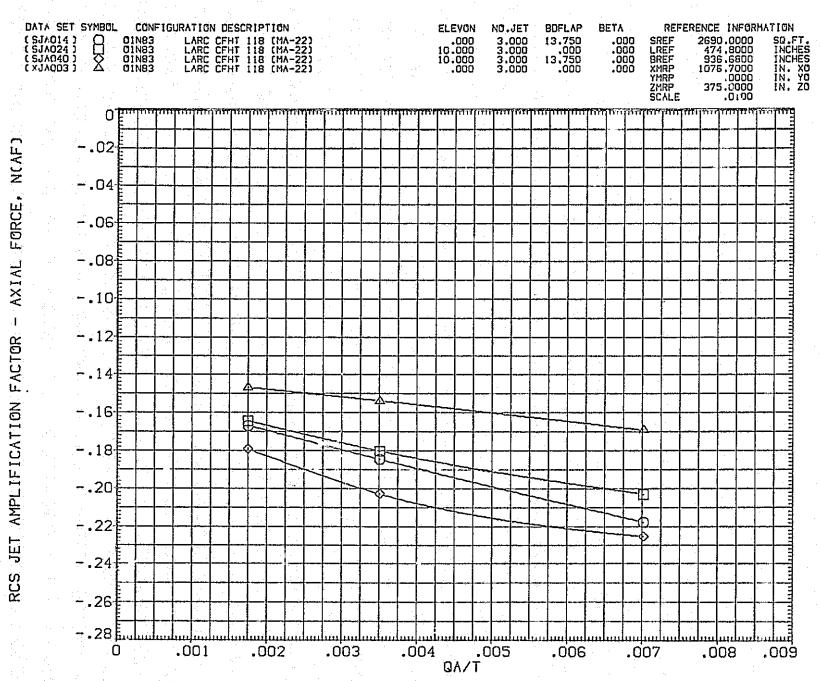


FIGURE 73. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N83

(E)ALPHA = 35.00

PAGE 1289

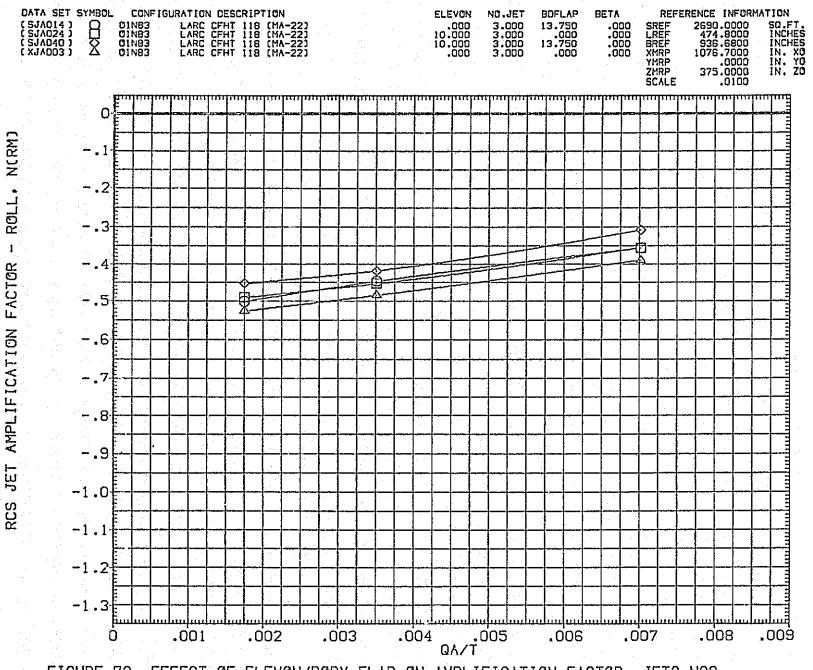


FIGURE 73. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N83

(A)ALPHA = -8.00

PAGE 1290

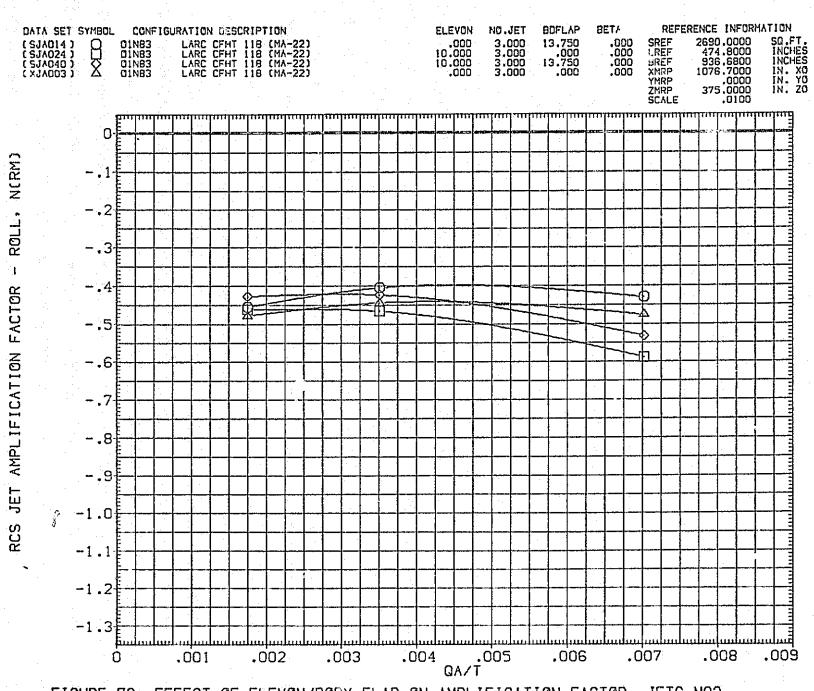


FIGURE 73. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N83

(B)ALPHA = .00

PAGE 1291

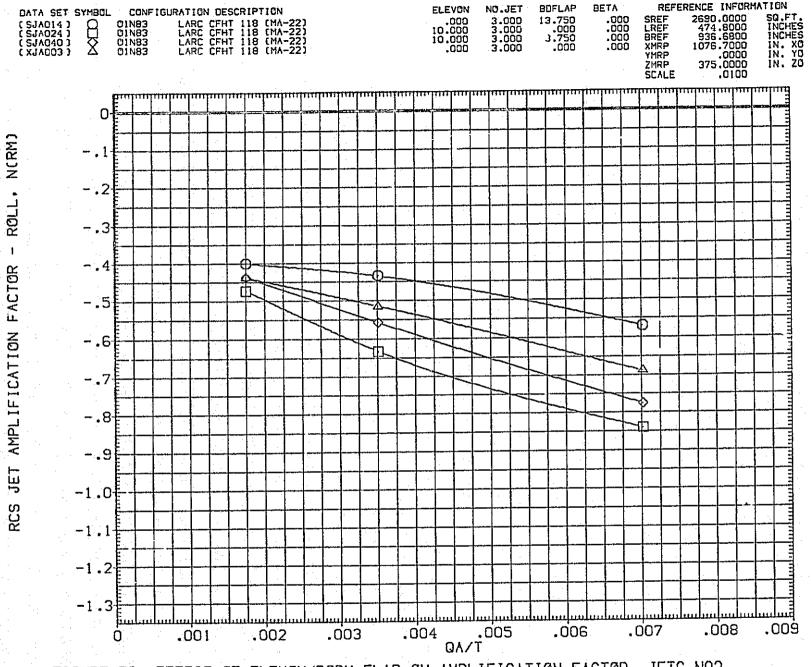


FIGURE 73. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N83

(C)ALPHA = 10.00

PAGE 1292

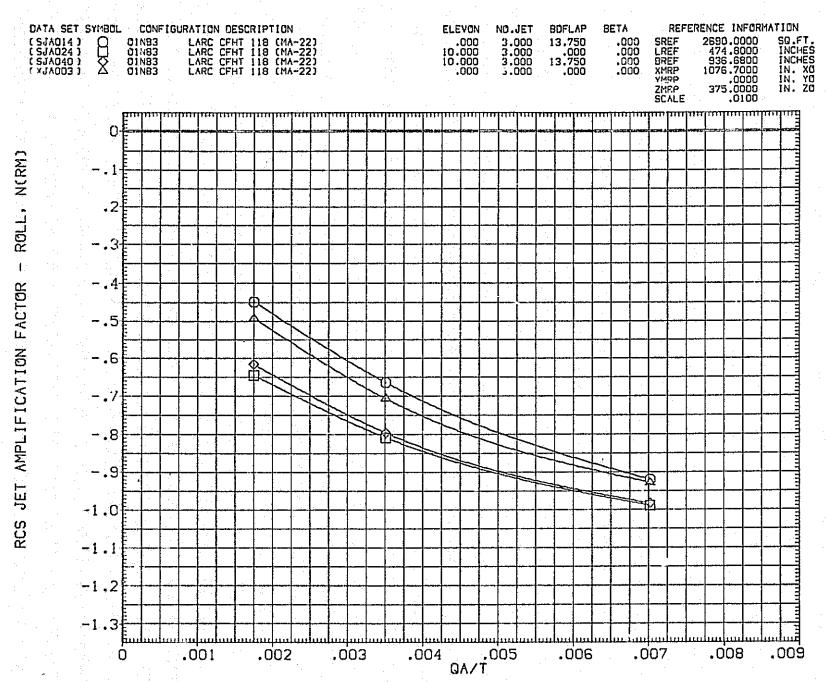


FIGURE 73. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N83

(D)ALPHA = 20.00

PAGE 1293

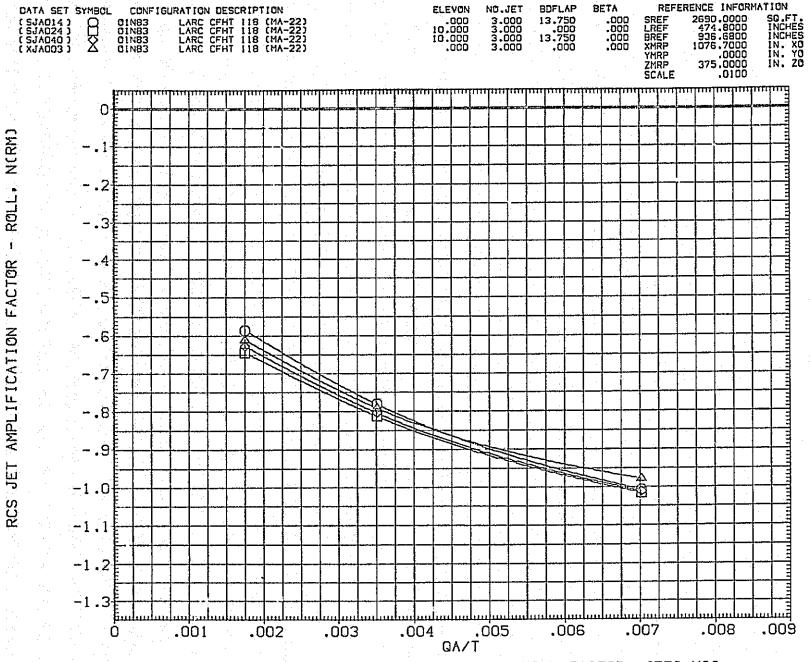


FIGURE 73. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N83

(E)ALPHA = 35.00

PAGE 1294

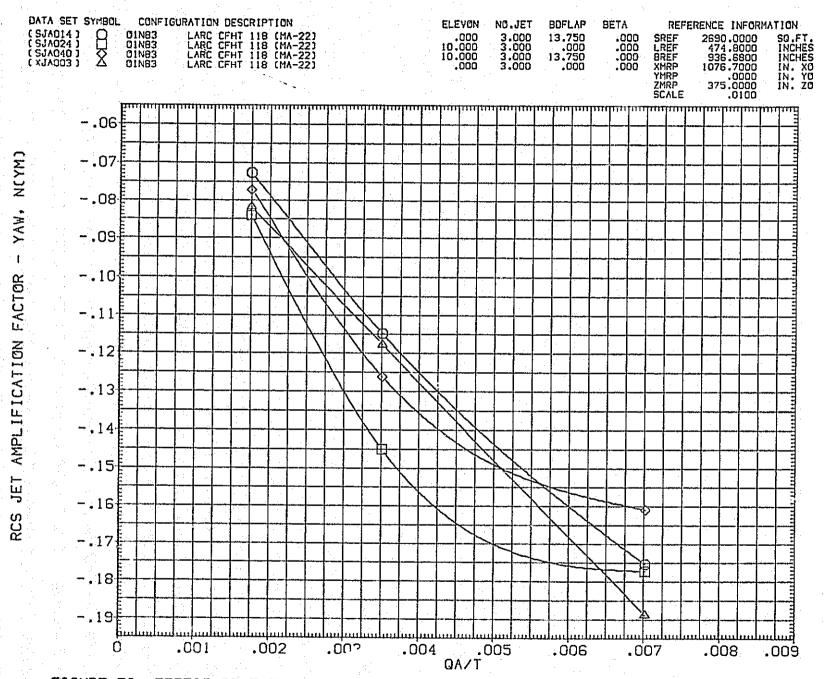


FIGURE 73. EFFECT OF ELEVON/BO. / FLAF ON AMPLIFICATION FACTOR, JETS N83

[A]ALPHA = -8.00

PAGE

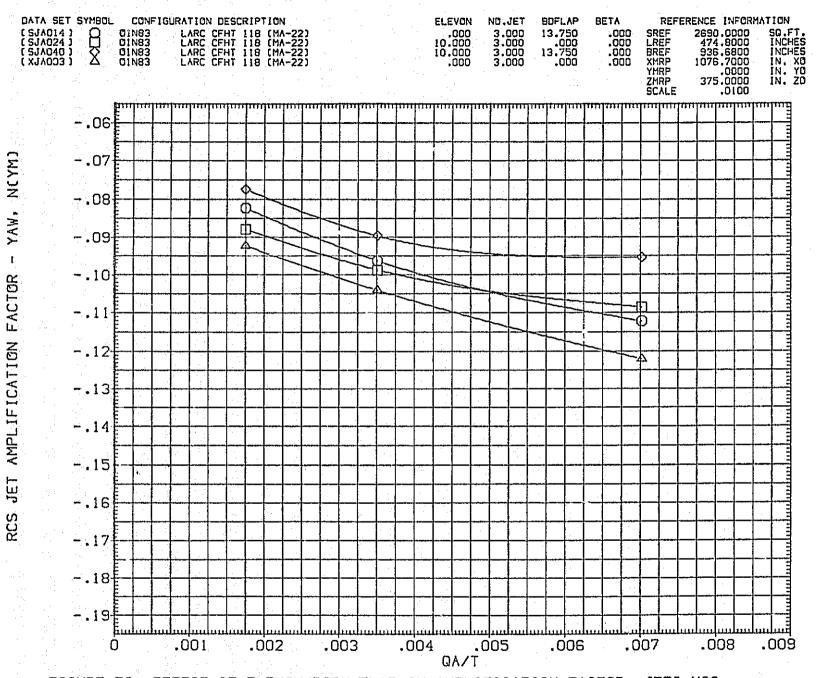


FIGURE 73. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N83

(B) ALPHA = .00

PAGE 1296

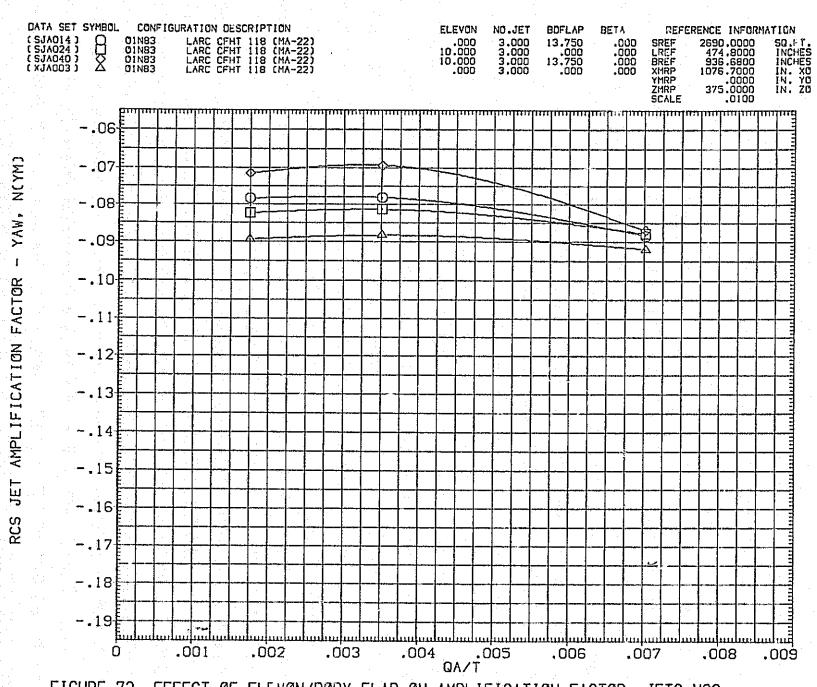


FIGURE 73. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N83

COALPHA = 10.00

PAGE 1297

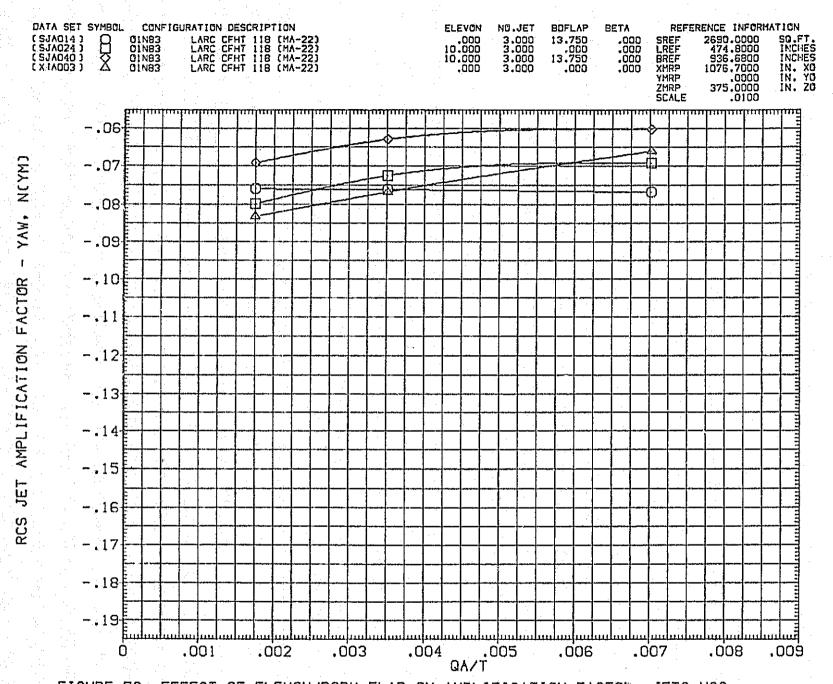


FIGURE 73. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N83

(D)ALPHA = 20.00

PAGE 1298

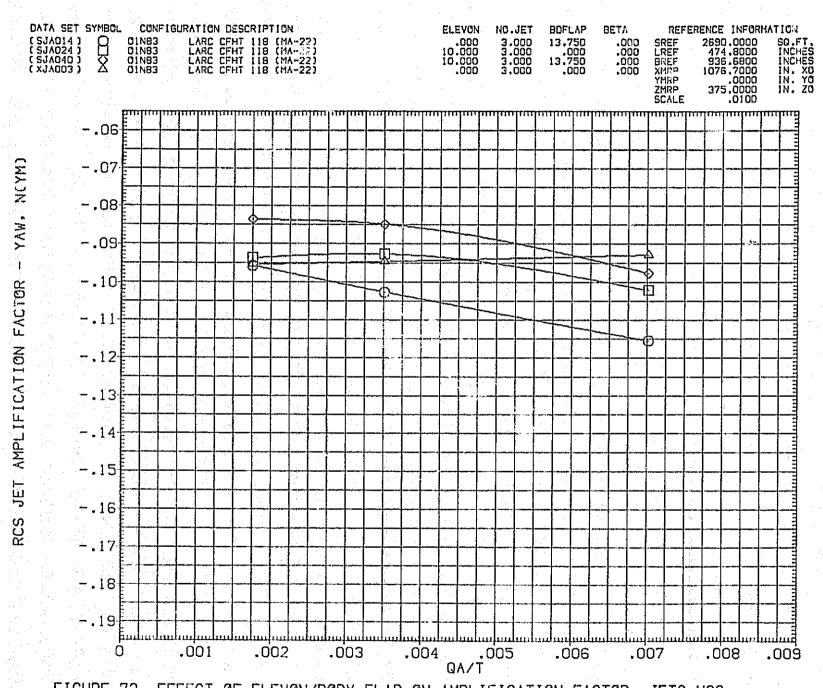


FIGURE 73. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N83

(E)ALPHA = 35.00

PAGE 1299

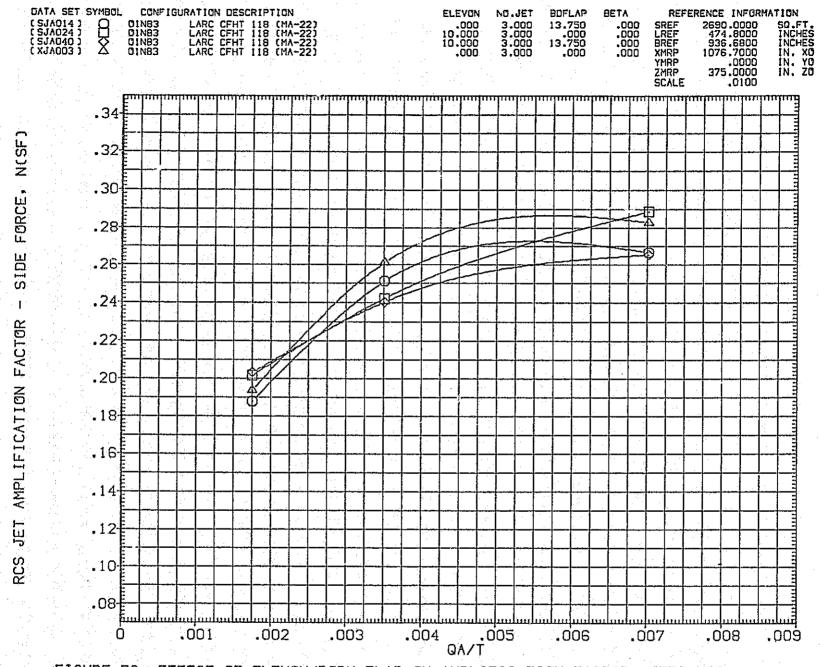


FIGURE 73. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N83

[A]ALPHA = -8.00

PAGE 1300

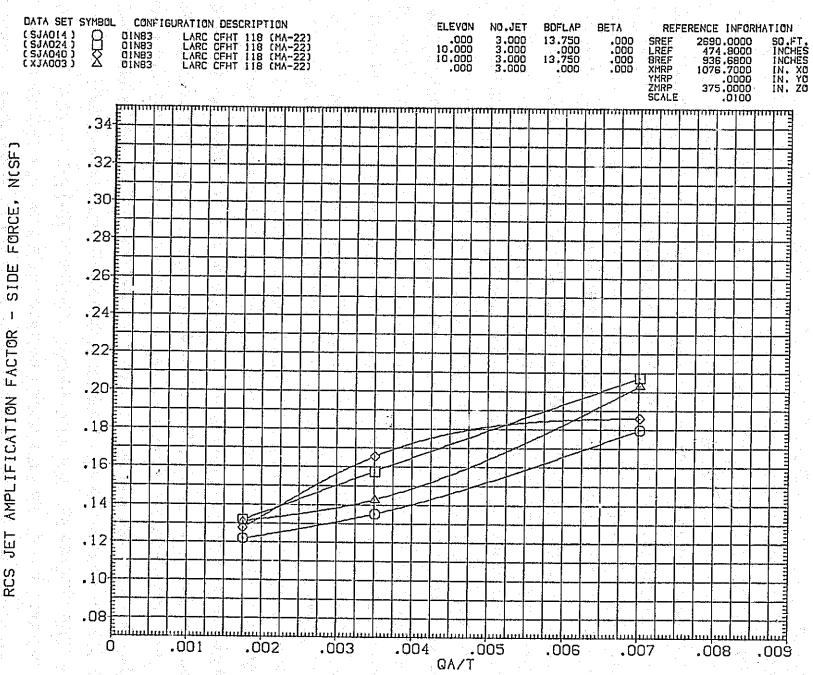


FIGURE 73. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N83

(B)ALPHA = .00

PAGE 1301

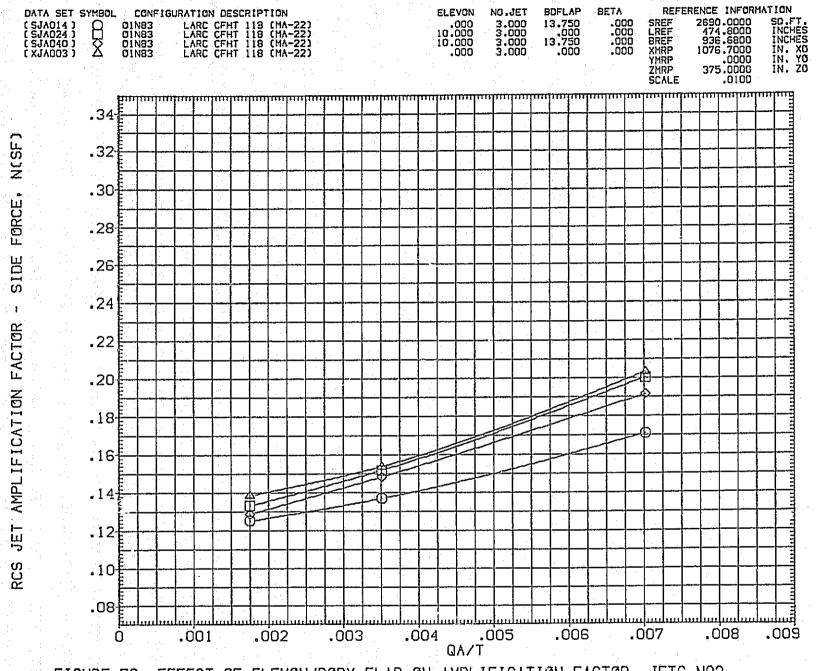


FIGURE 73. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N83

COALPHA = 10.00

PAGE 1302

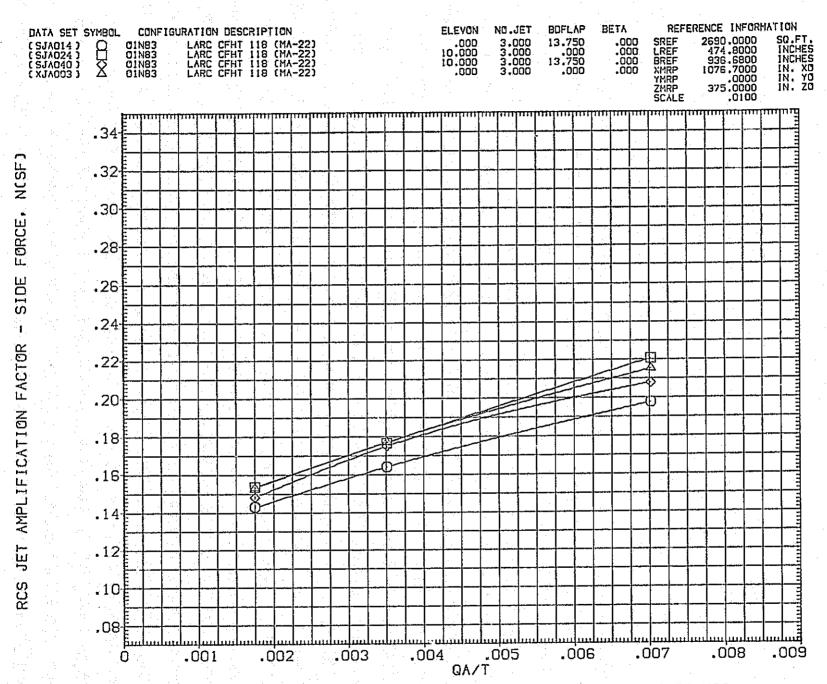


FIGURE 73. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N83

[D]ALPHA = 20.00

PAGE 1303

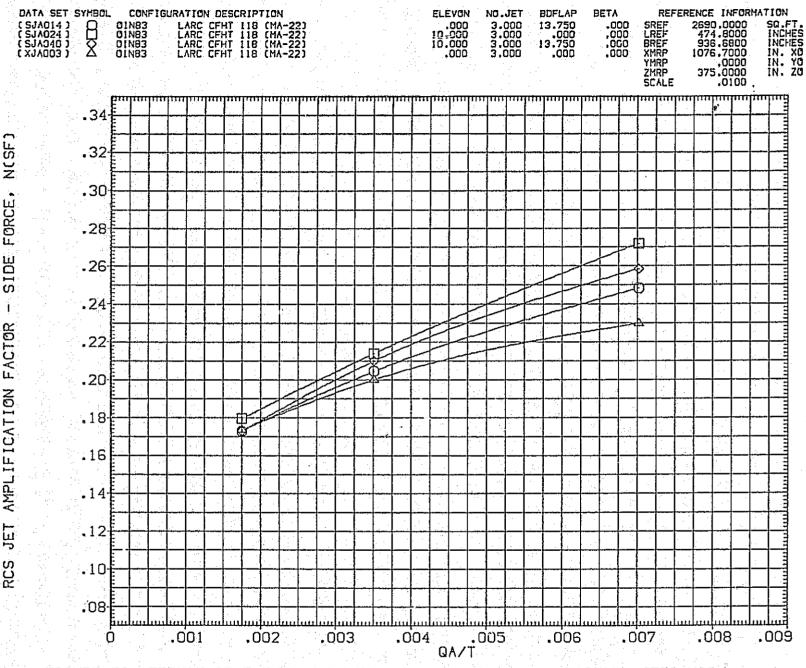


FIGURE 73. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N83

(E)ALPHA = 35.00

PAGE 1304

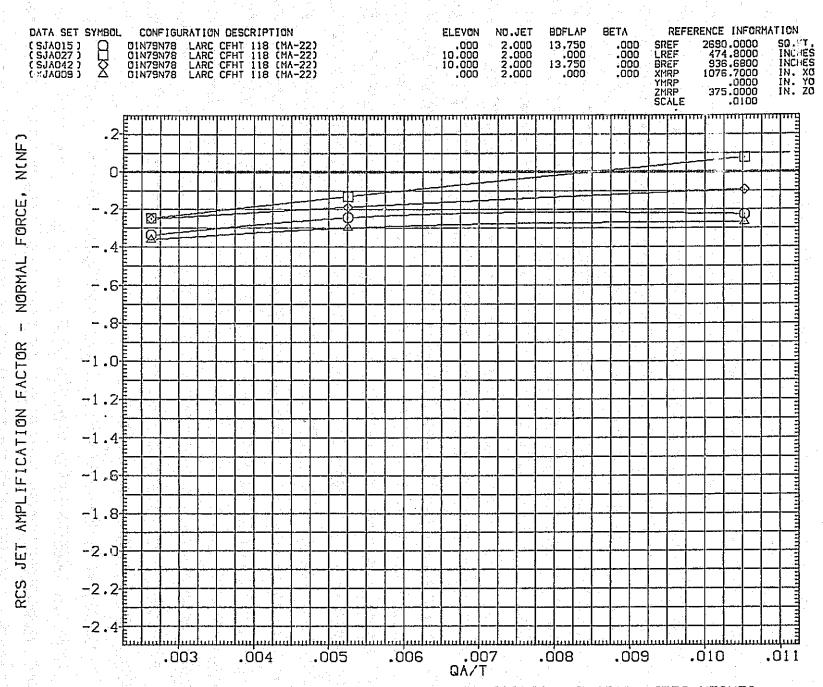


FIGURE 74. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79N78

(A)ALPHA = -8.00

PAGE 1305

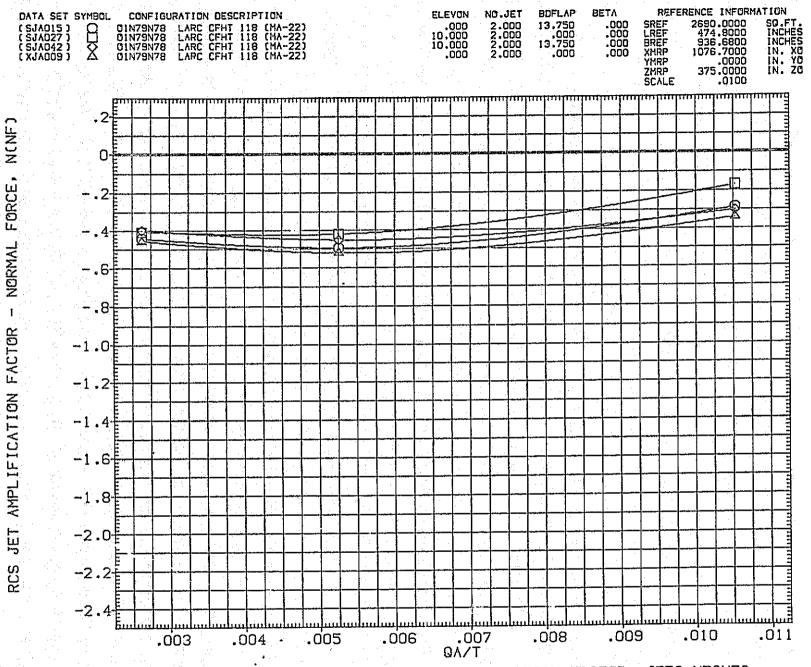


FIGURE 74. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79N78

(B) ALPHA = .00

PAGE 1306

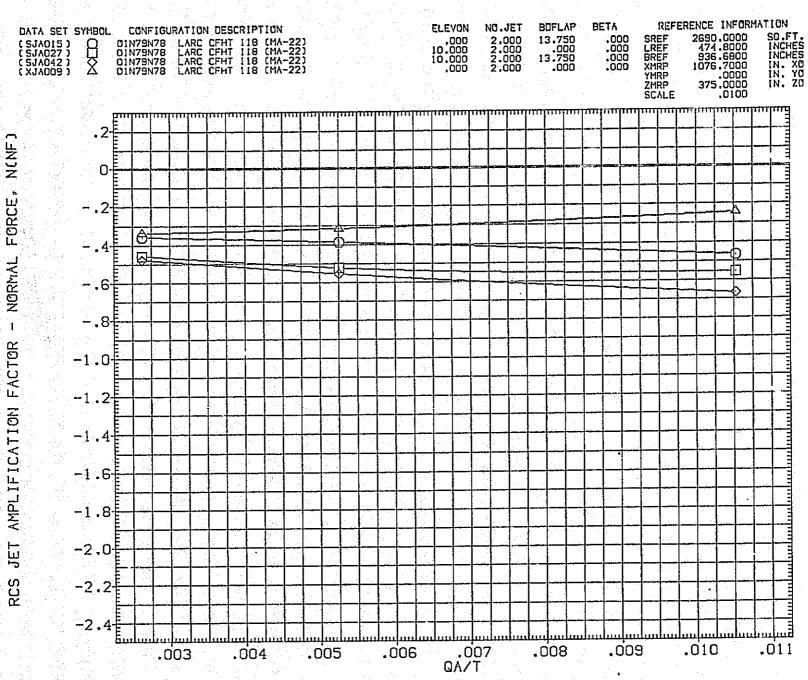


FIGURE 74. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79N78

(C)ALPHA = 10.00

PAGE 1307

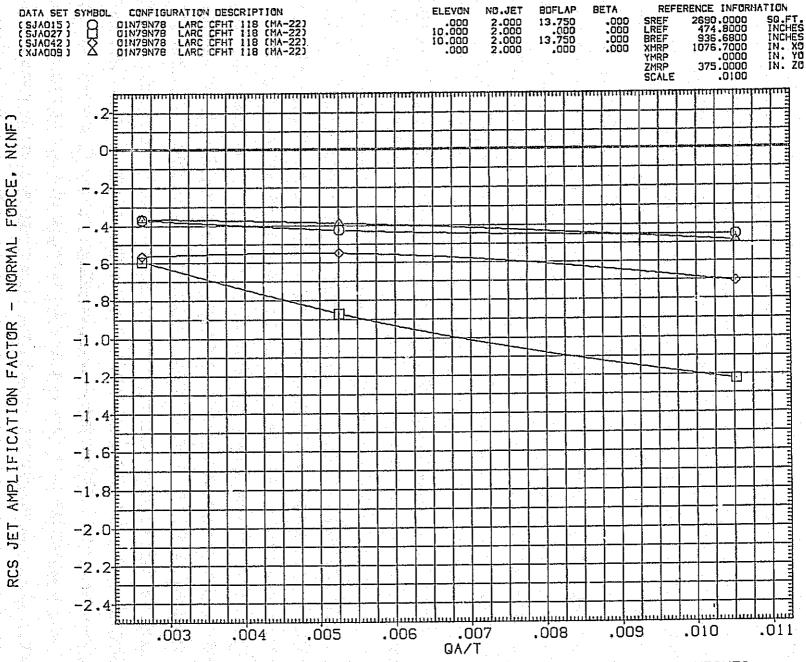


FIGURE 74. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79N78

(D)ALPHA = 20.00

PAGE 1308

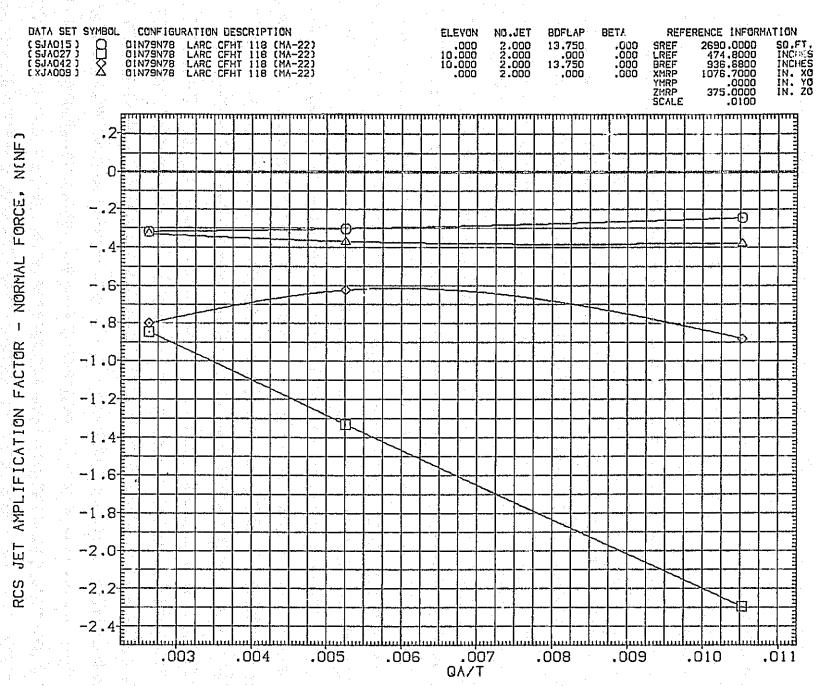


FIGURE 74. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79N78

(E)ALPHA = 35.00

PAGE 1309

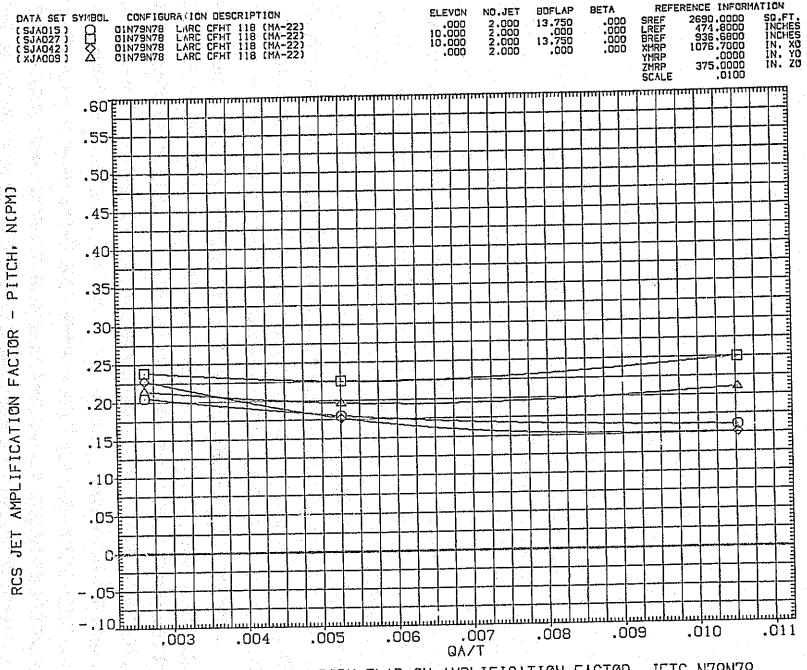


FIGURE 74. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79N78

PAGE 1310

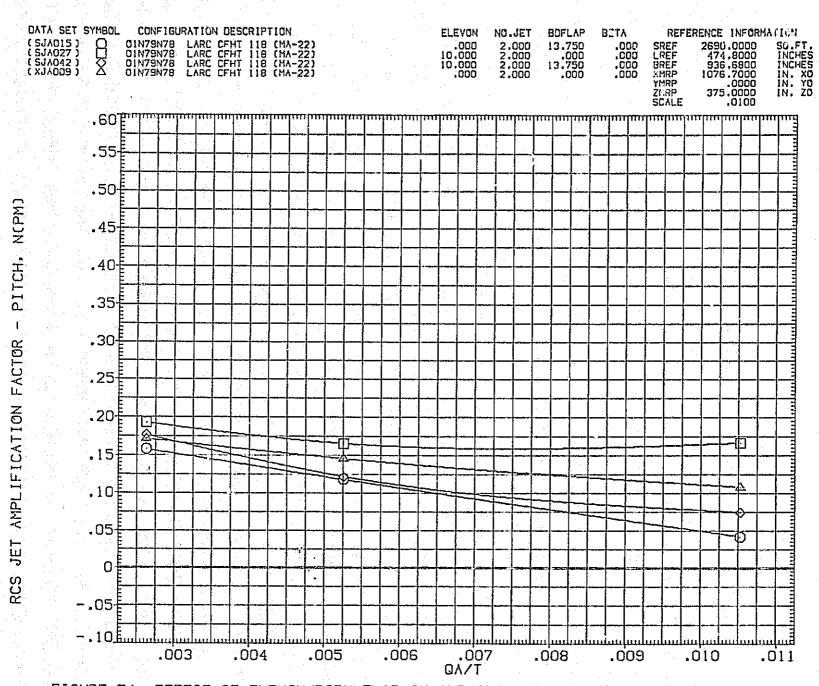


FIGURE 74. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79N78

(B)ALPHA = .00

PAGE 1311

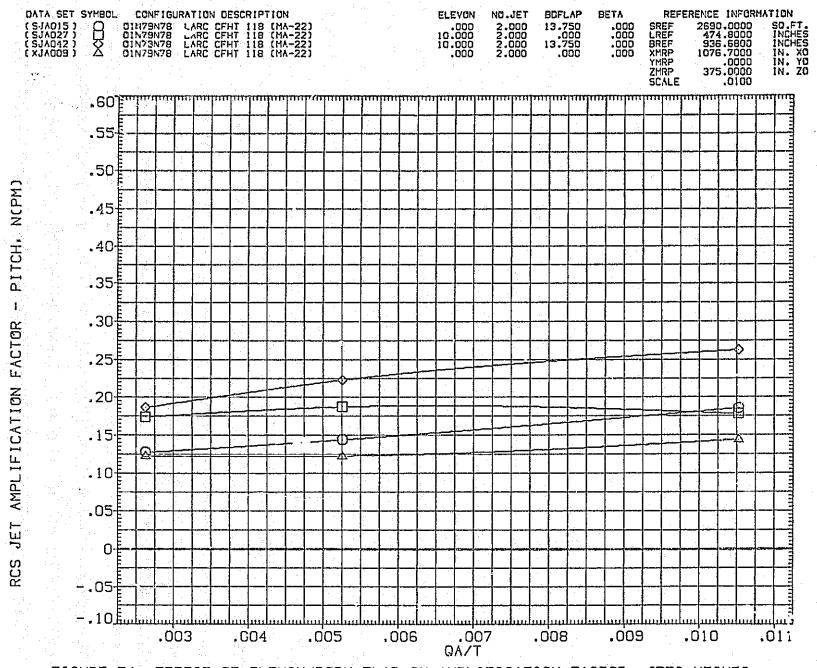


FIGURE 74. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79N78

(C)ALPHA = 10.00

PAGE 1312



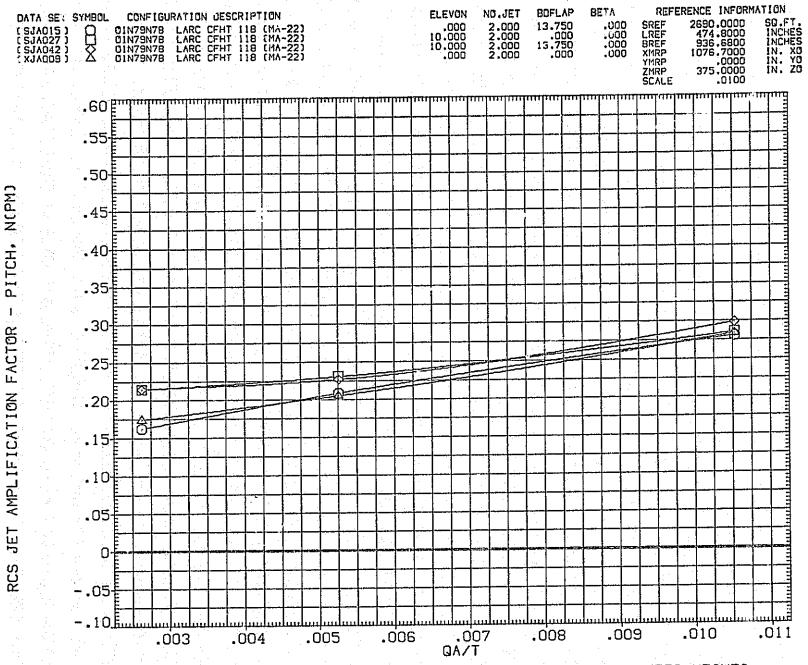


FIGURE 74. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79N78

[D] ALPHA = 20.00 PAGE 1313

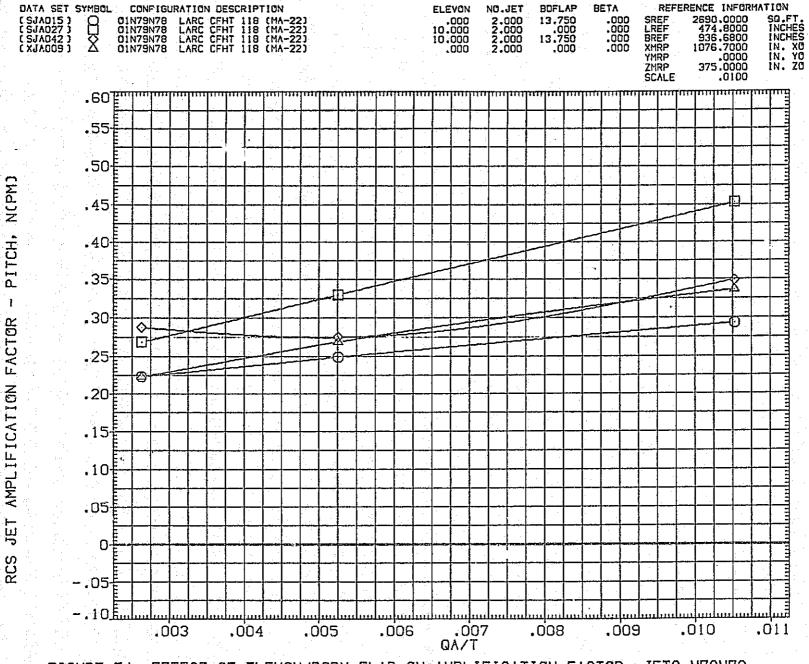


FIGURE 74. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79N78

(E)ALPHA = 35.00

PAGE 1314

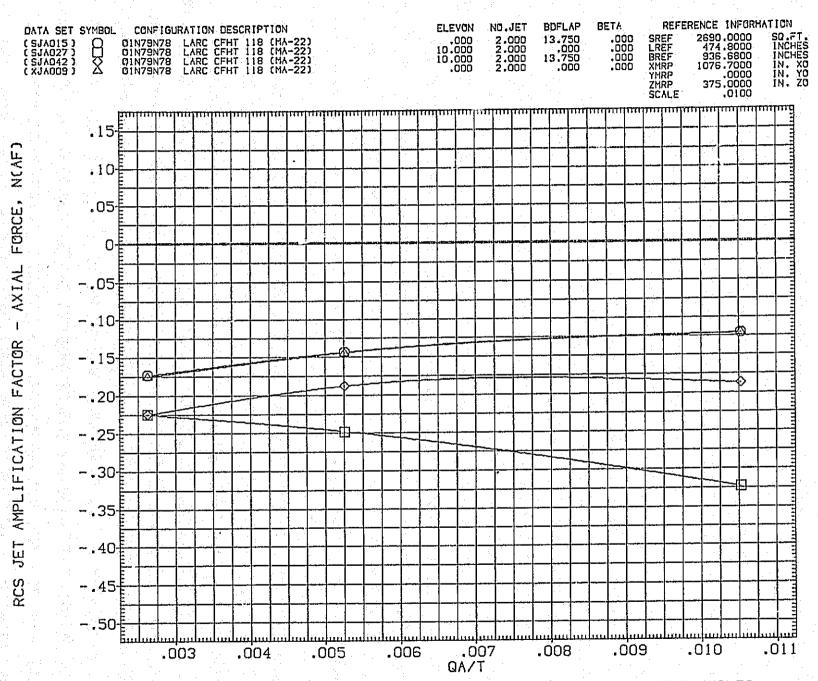


FIGURE 74. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79N78

[A]ALPHA = -8.00

PAGE 1315

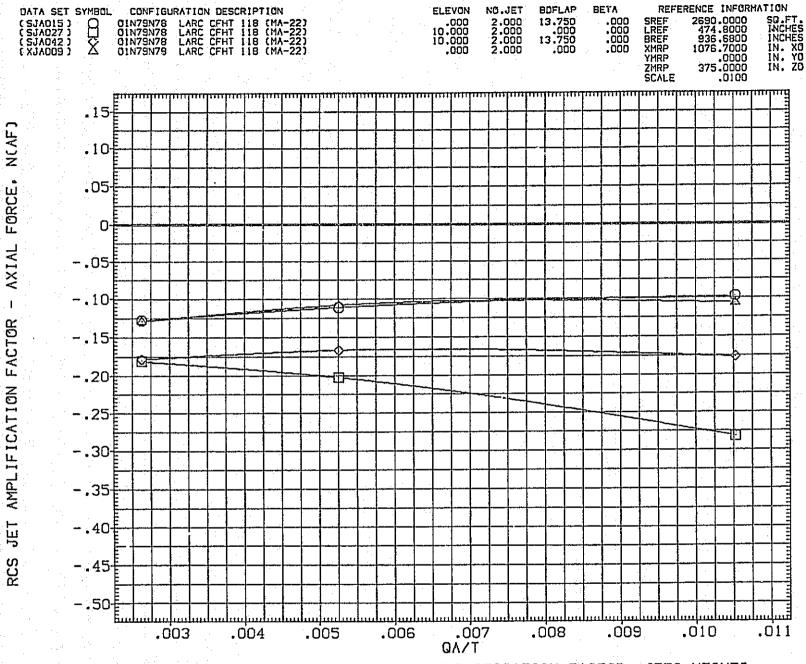


FIGURE 74. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79N78

(B) ALPHA = .00

PAGE 1316

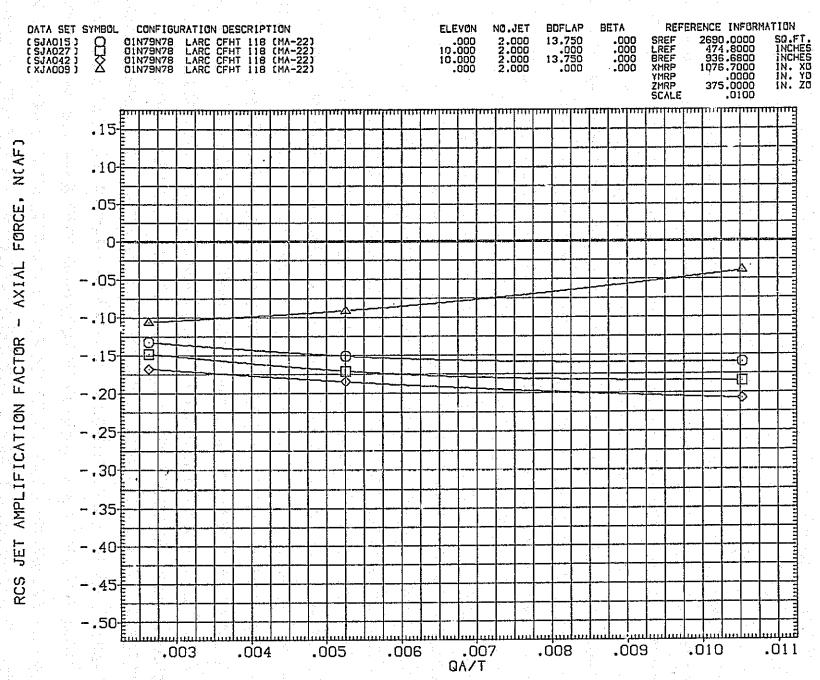


FIGURE 74. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79N78

CC)ALPHA = 10.00

PAGE 1317

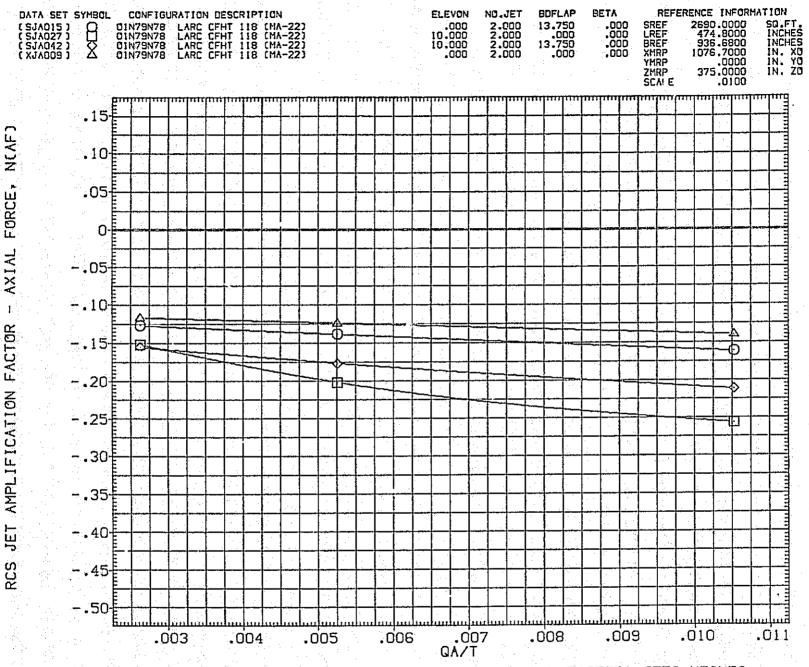


FIGURE 74. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79N78

CD)ALPHA = 20.00

PAGE 1318

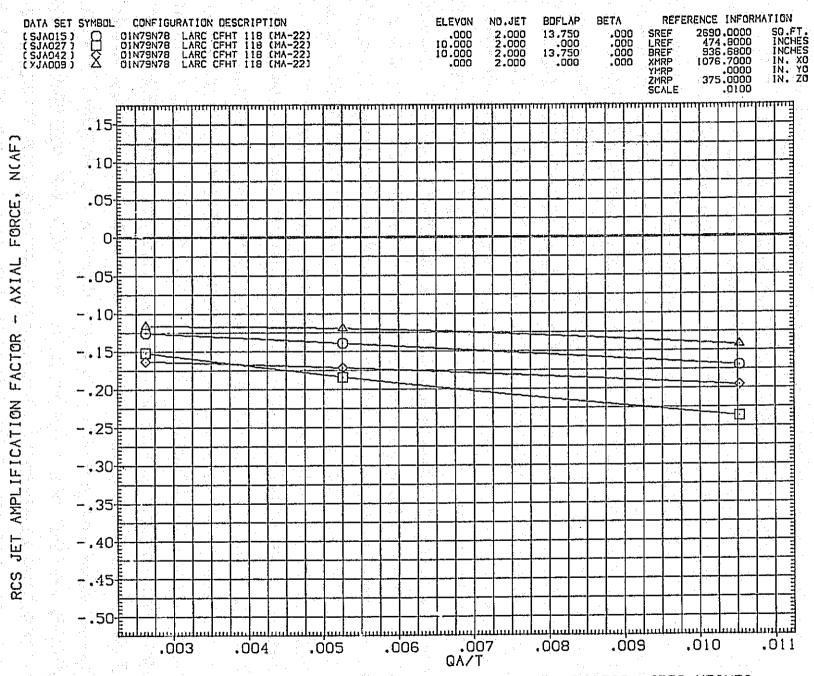


FIGURE 74. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79N78

(E) ALPHA = 35.00

PAGE 1319

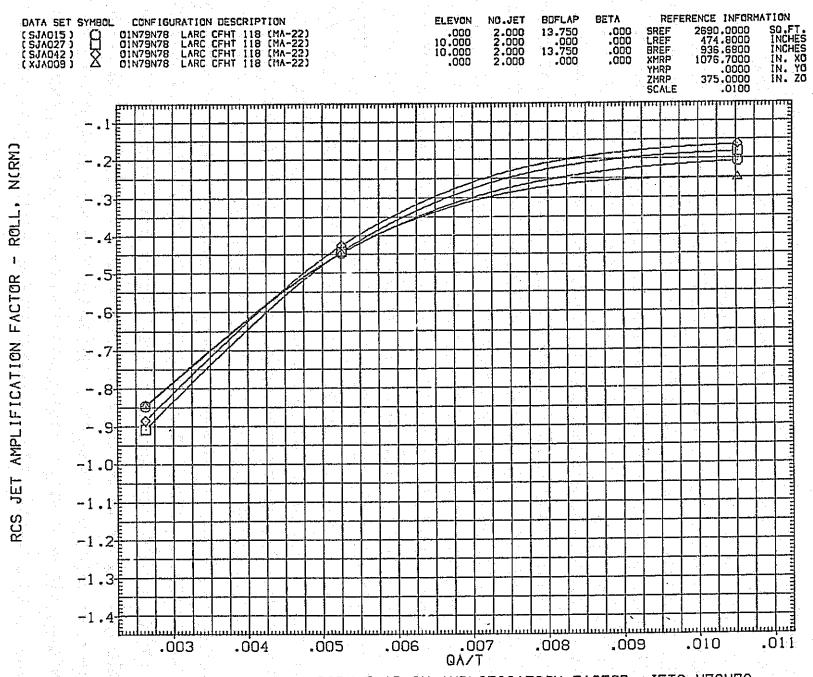


FIGURE 74. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79N78

(A)ALPHA = -8.00

PAGE 1320

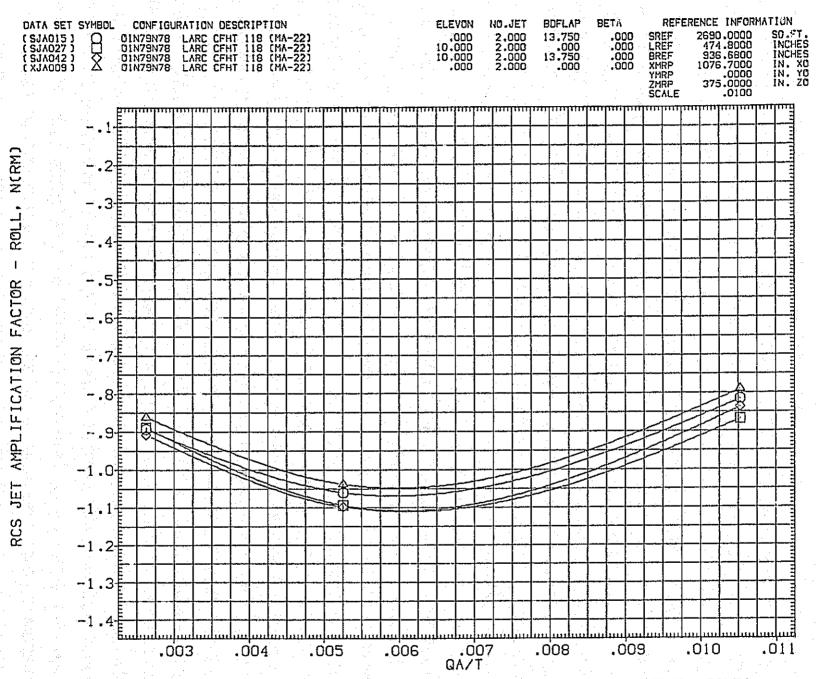


FIGURE 74. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79N78

(B) ALPHA = .00

PAGE 1321

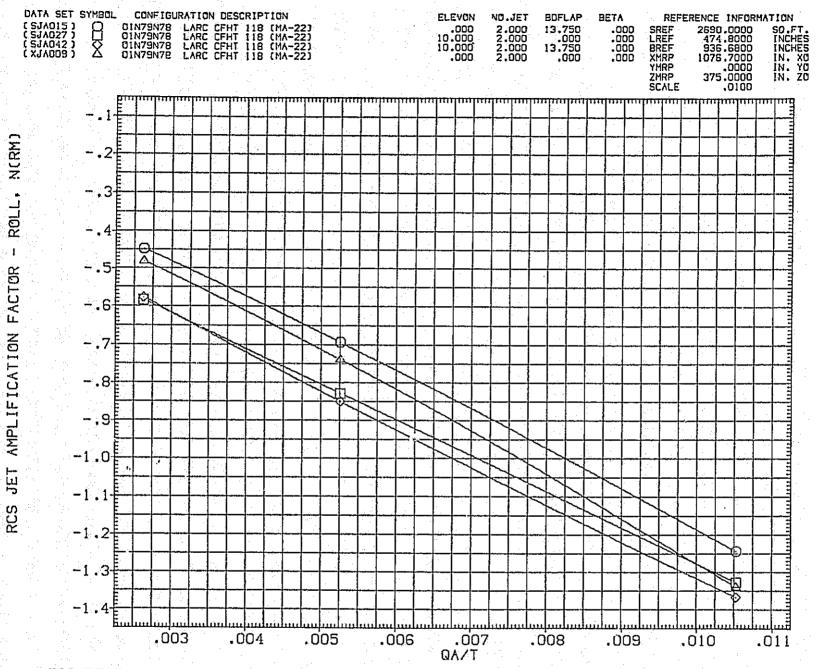


FIGURE 74. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79N78

(C)ALPHA = 10.00

PAGE 1322

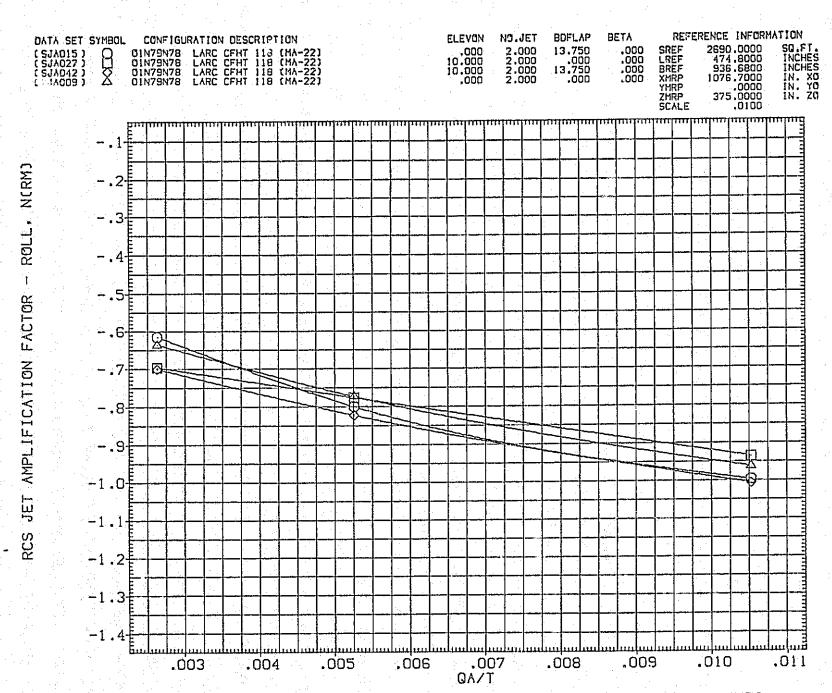


FIGURE 74. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79N78

(D) ALPHA = 20.00

PAGE 1323

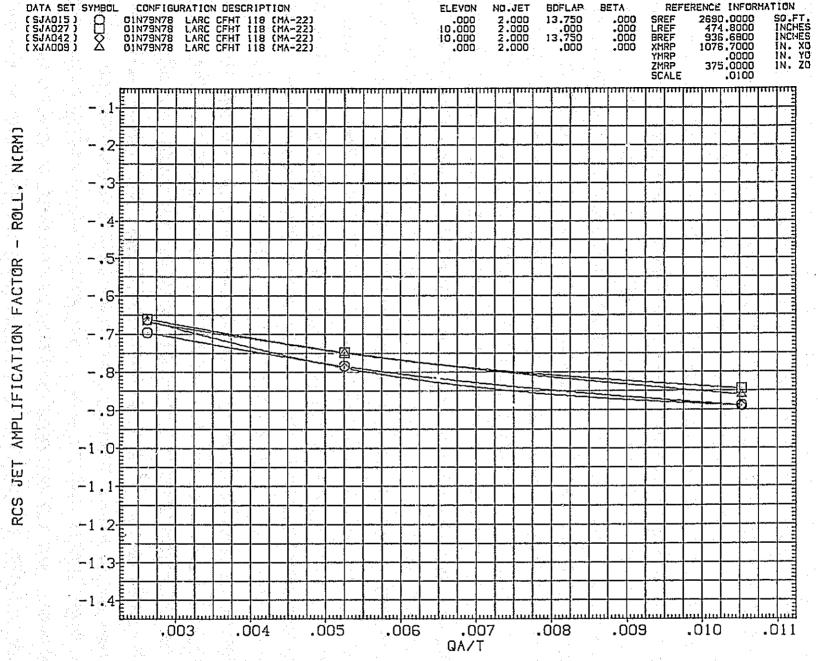


FIGURE 74. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79N78

(E)ALPHA = 35.00

PAGE 1324

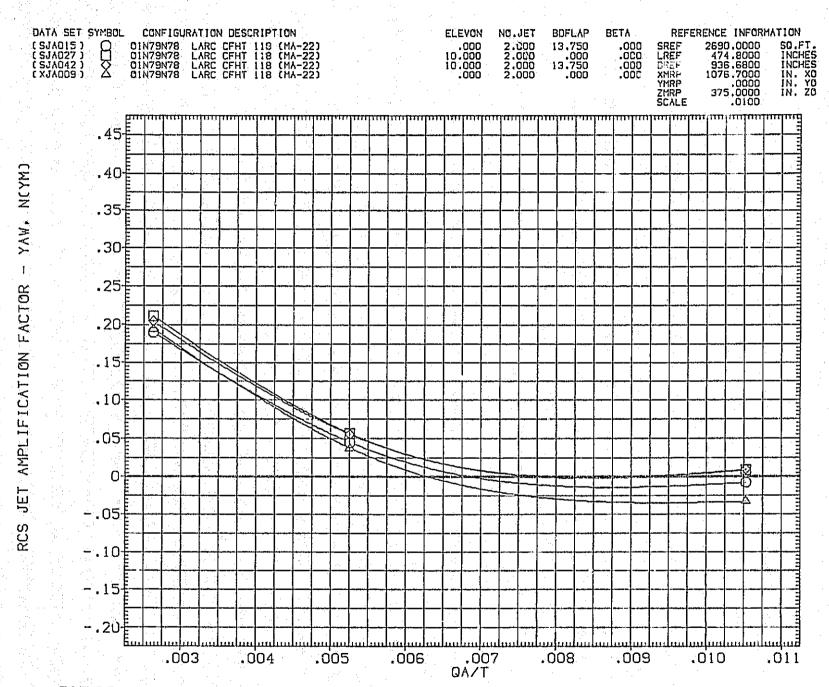


FIGURE 74. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79N78

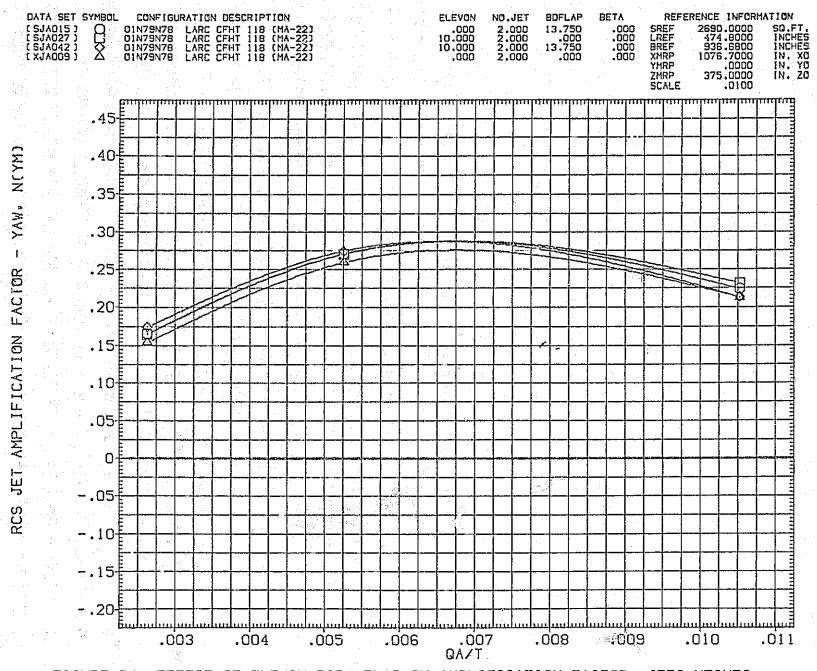


FIGURE 74. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79N78

(B)ALPHA = .00 PAGE 1326

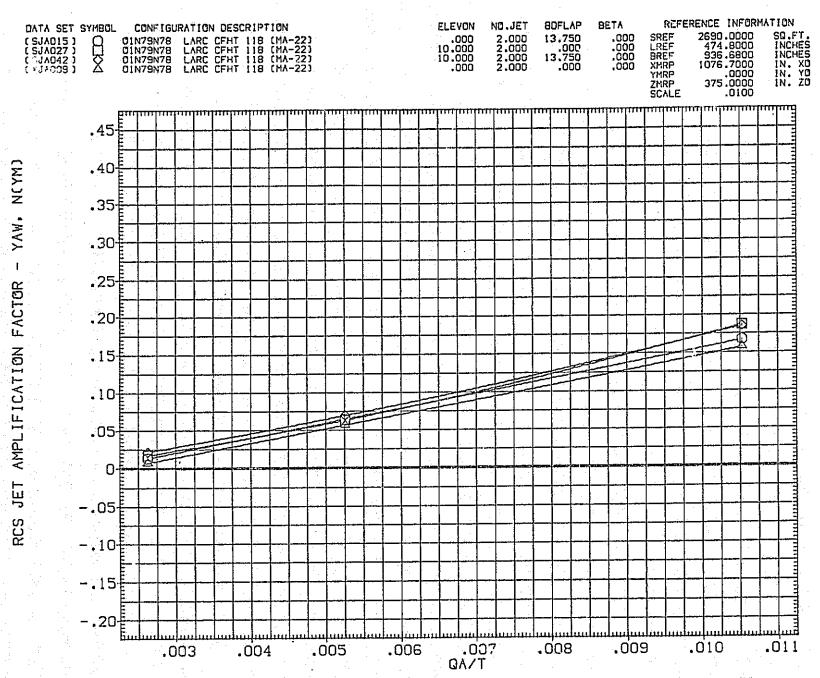


FIGURE 74. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79N78

CC) ALPHA = 10.00

PAGE 1327

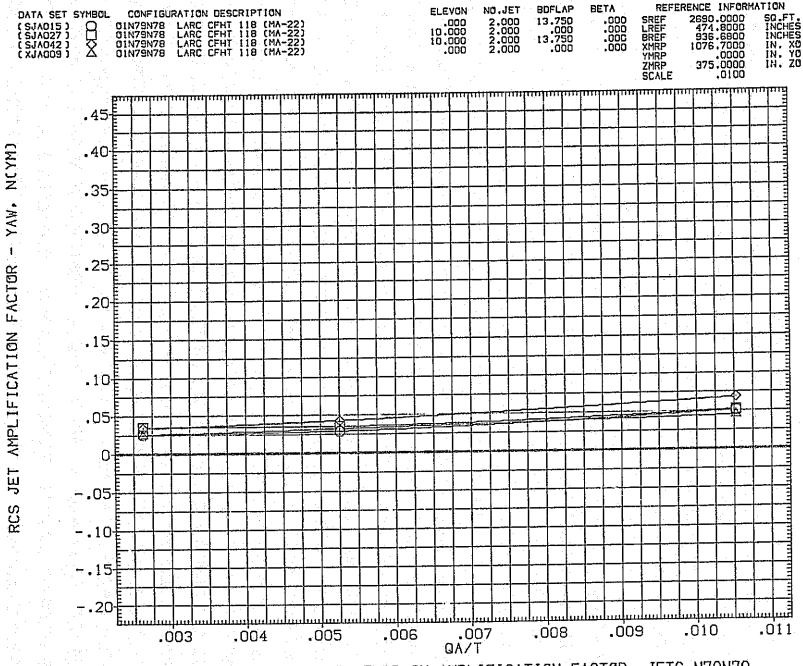


FIGURE 74. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79N78

(D)ALPHA = 20.00

PAGE 1328

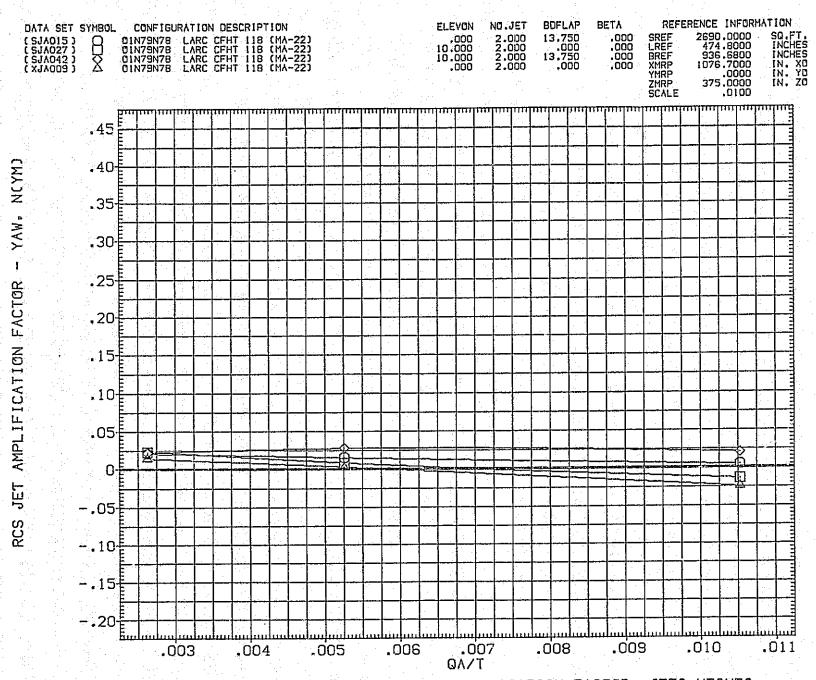


FIGURE 74. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79N78

(E)ALPHA = 35.00

PAGE 1329

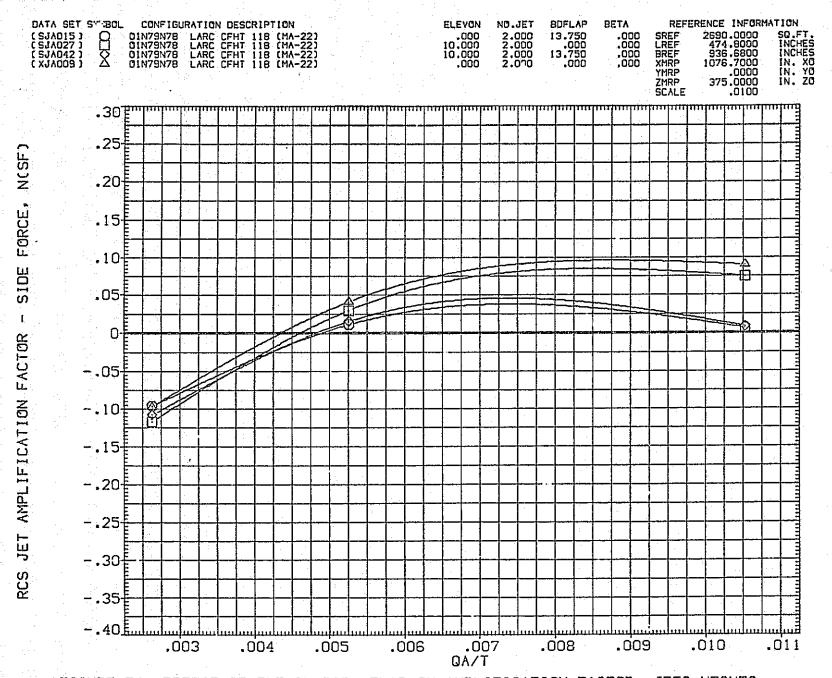


FIGURE 74. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79N78

(A)ALPHA = -8.00

PAGE 1330

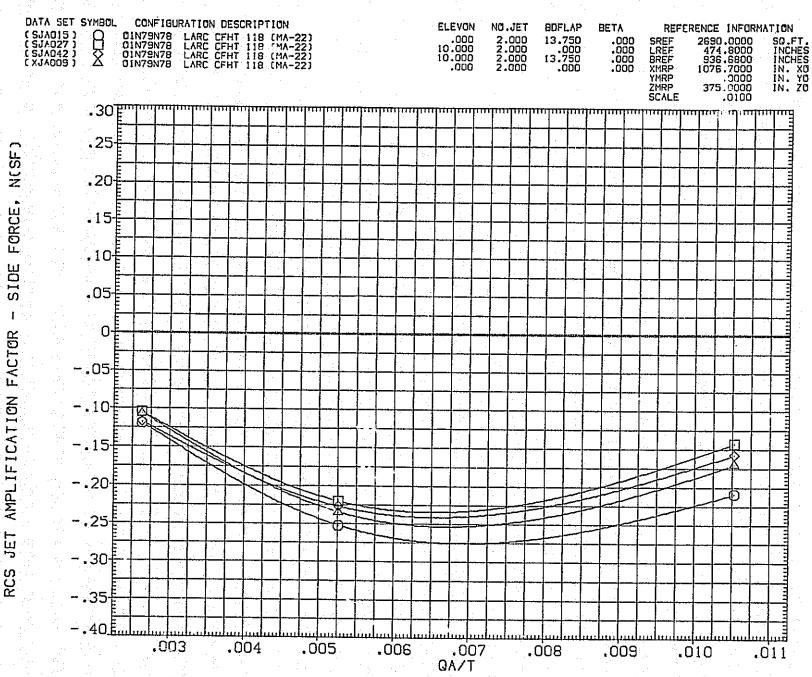


FIGURE 74. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79N78

(B)ALPHA = .00

PAGE 1331

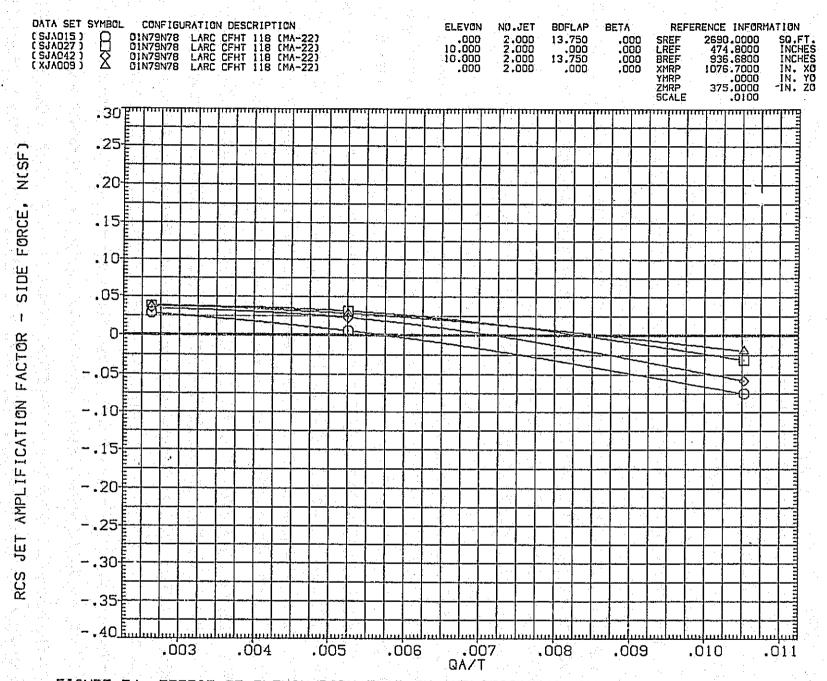


FIGURE 74. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79N78

CCJALPHA = 10.00

PAGE 1332

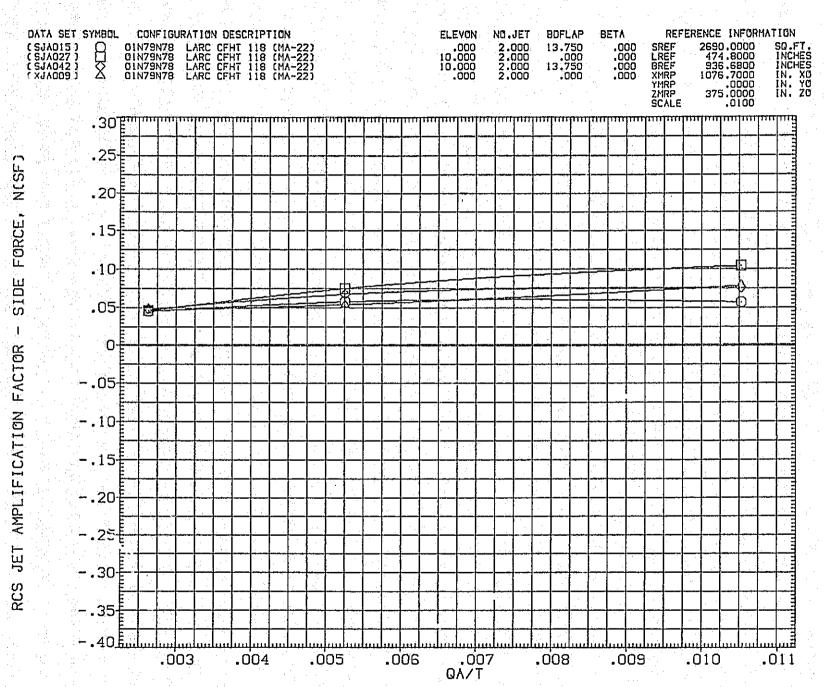


FIGURE 74. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79N78

(D)ALPHA = 20.00 PAGE 1333

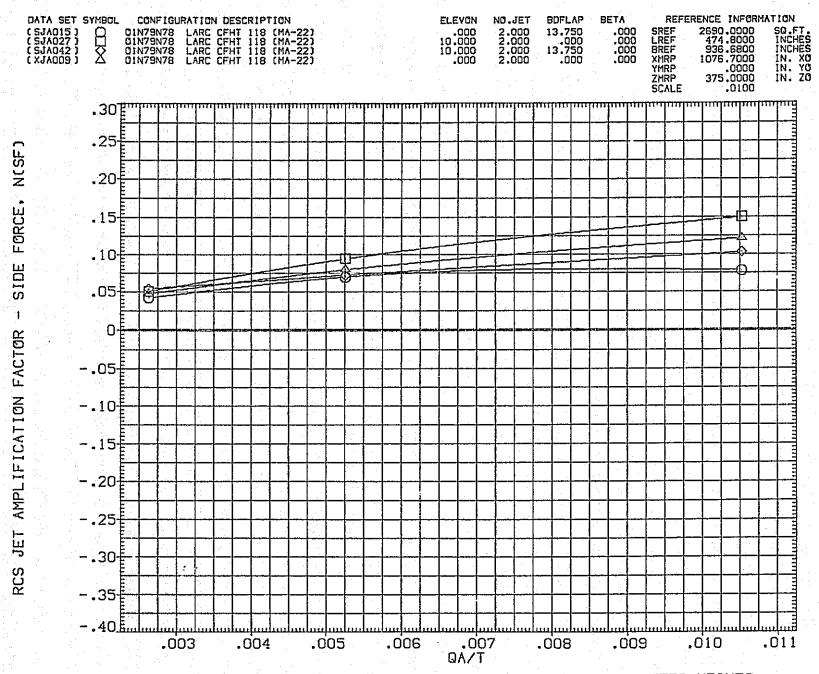


FIGURE 74. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79N78

(E)ALPHA = 35.00

PAGE 1334

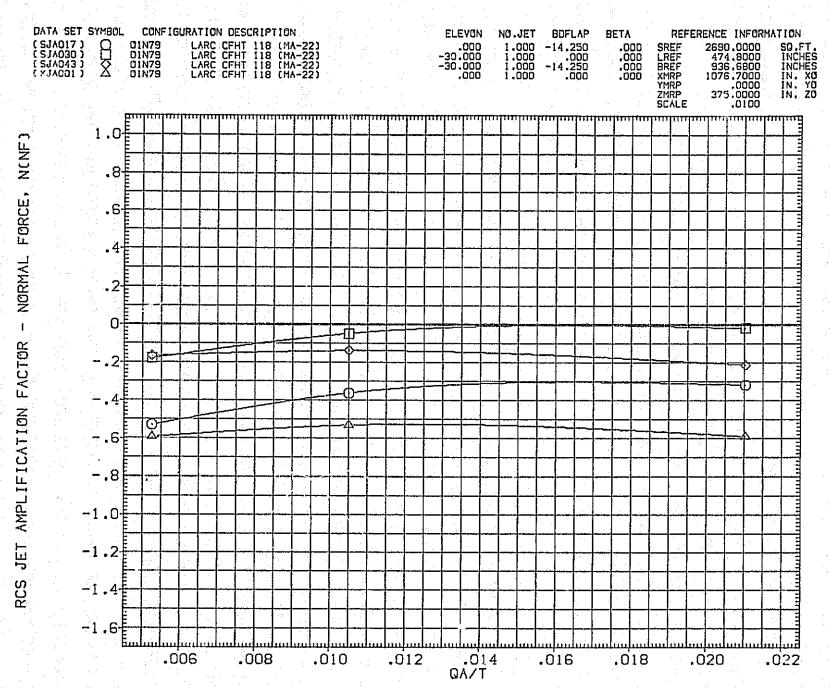


FIGURE 75. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79

[A]ALPHA = -8.00

PAGE 1335

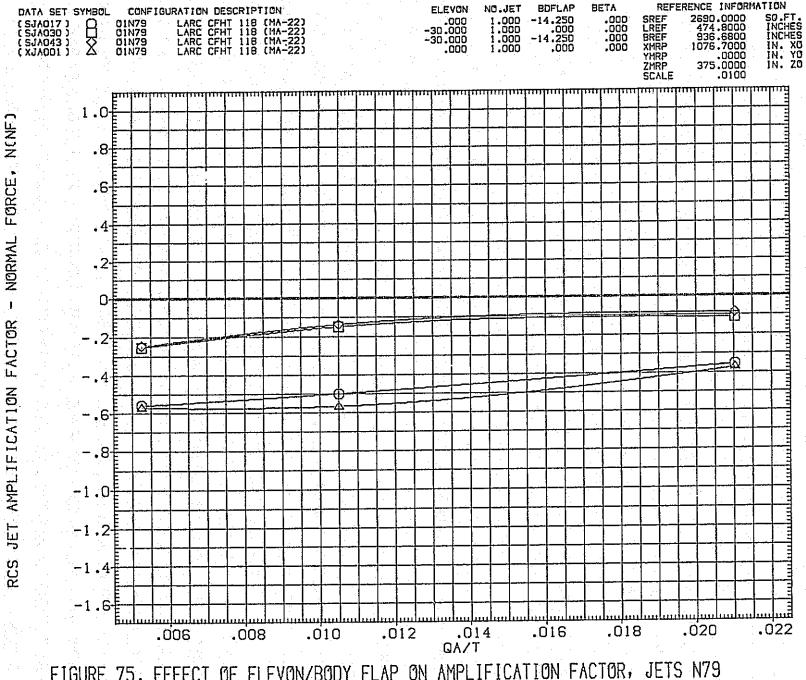


FIGURE 75. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79

(B) ALPHA = .00

PAGE 1336

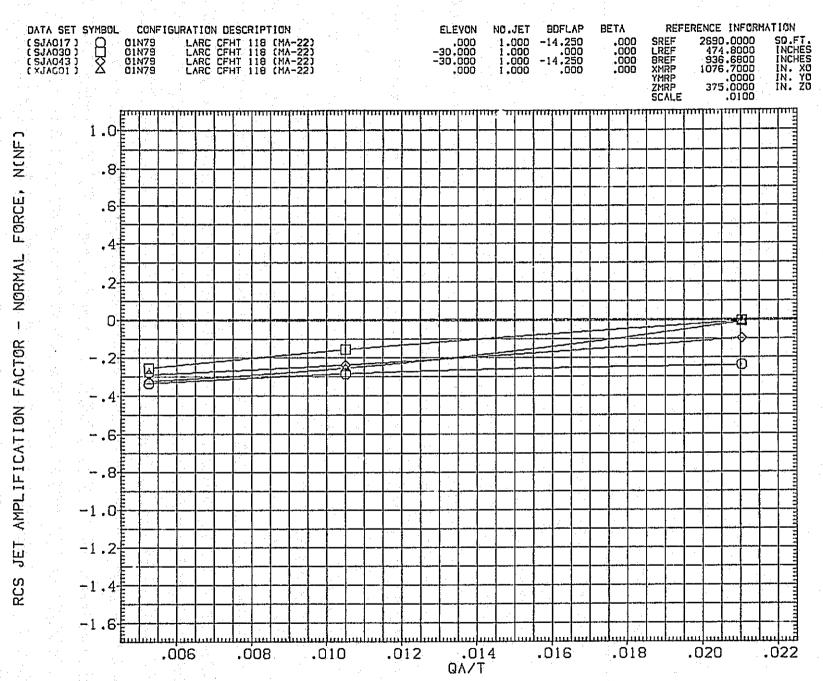


FIGURE 75. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79

CC)ALPHA = 10.00

PAGE 1337

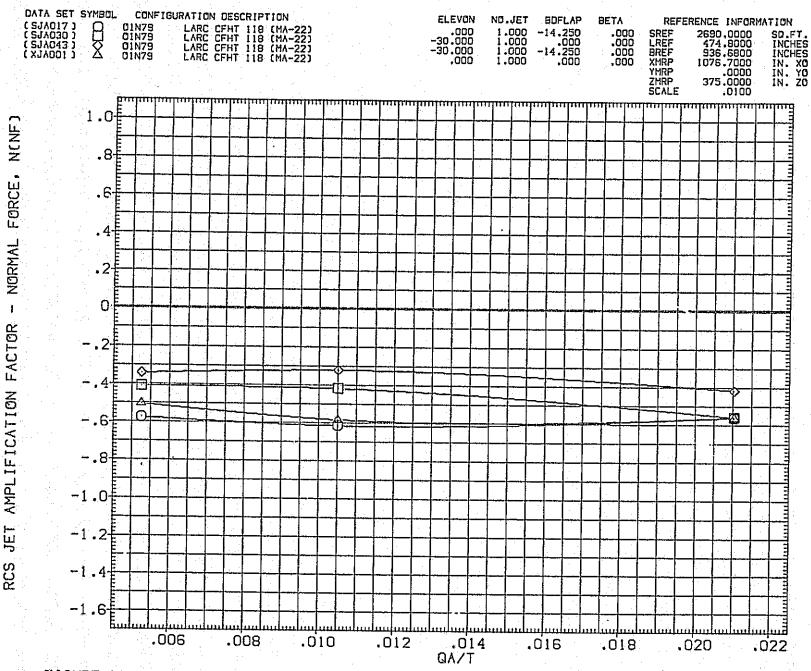


FIGURE 75. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79 (D)ALPHA = 20.00PAGE 1338

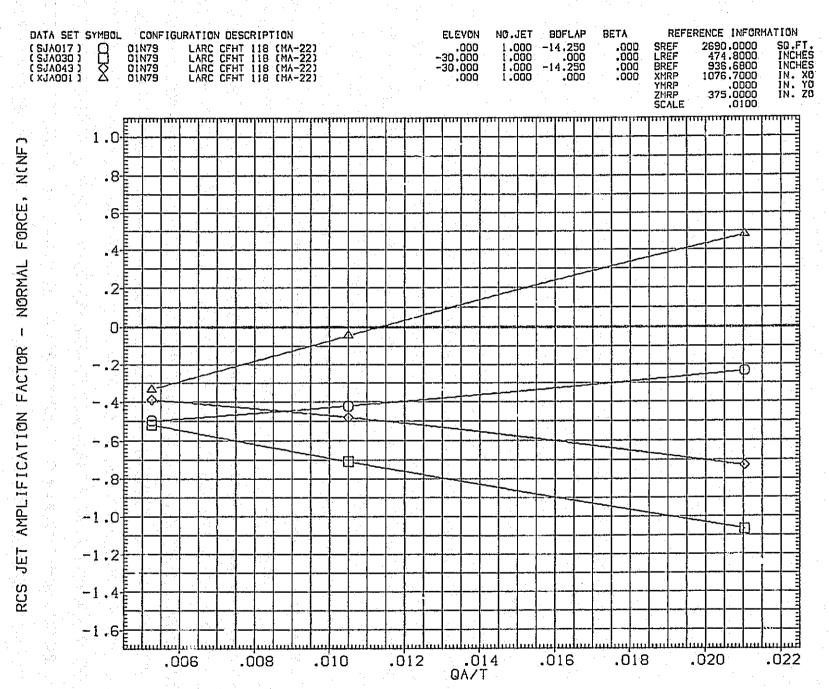


FIGURE 75. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79

(E)ALPHA = 35.00

PAGE 1339

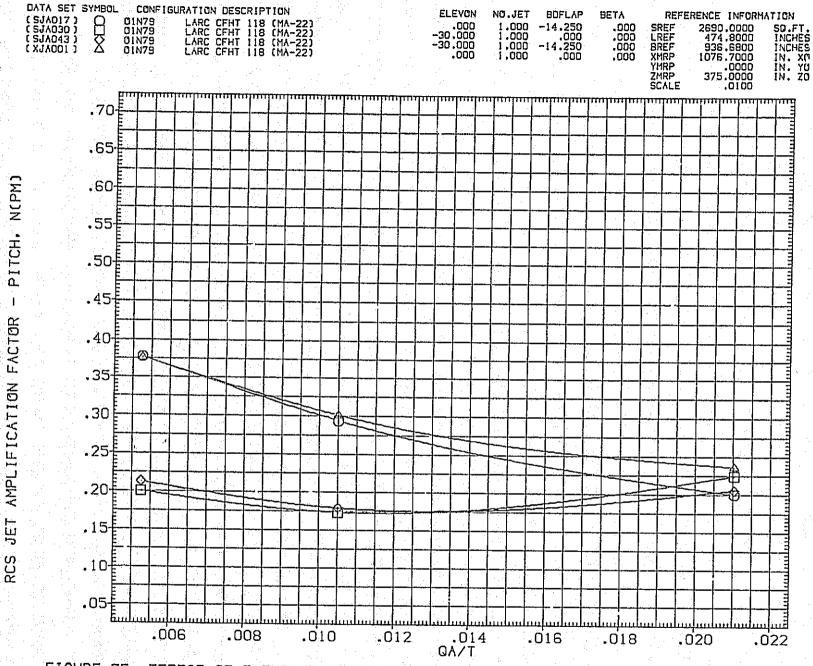


FIGURE 75. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79

CAJALPHA = -8.00

PAGE 1340

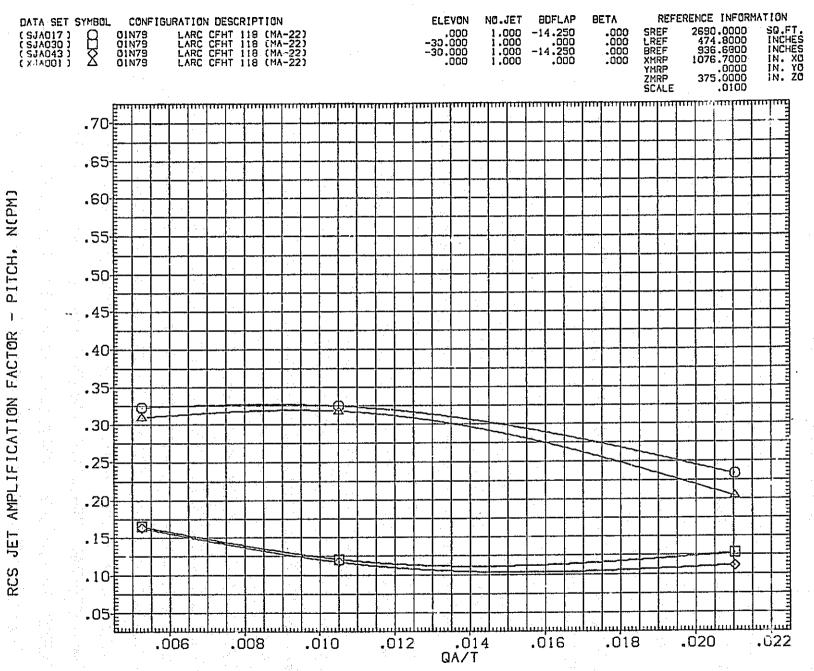


FIGURE 75. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79

(B)ALPHA = .00

PAGE 1341

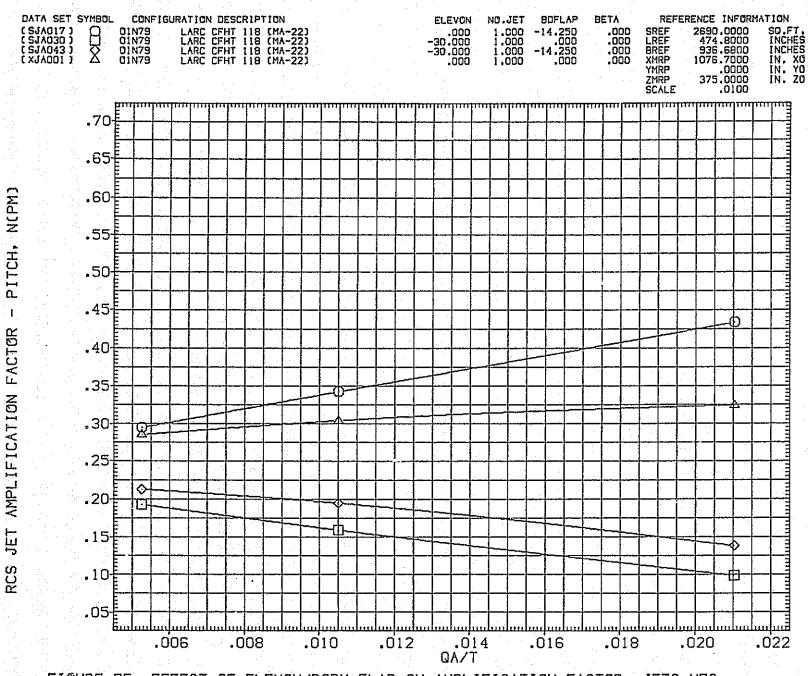


FIGURE 75. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79

CC)ALPHA = 10.00

PAGE 1342

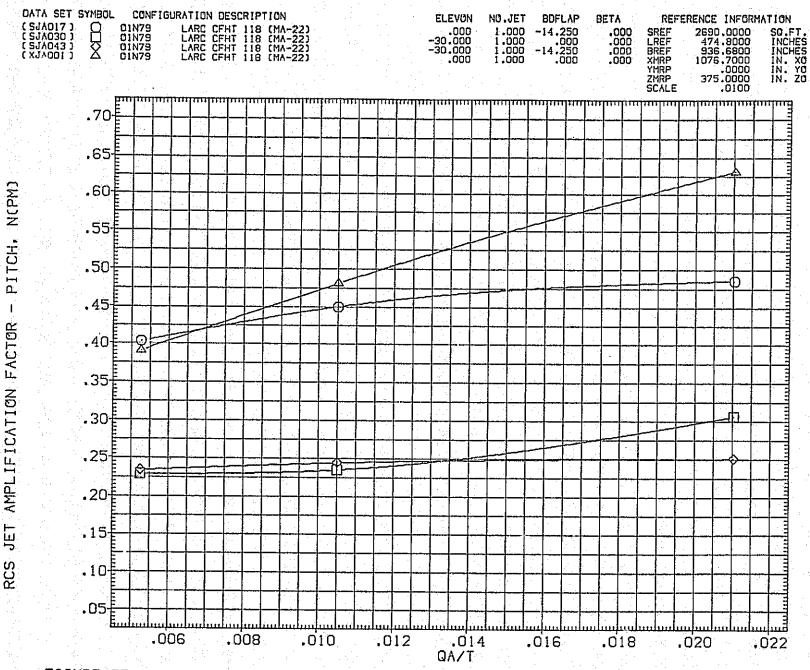


FIGURE 75. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79

CD)ALPHA = 20.00

PAGE 1343

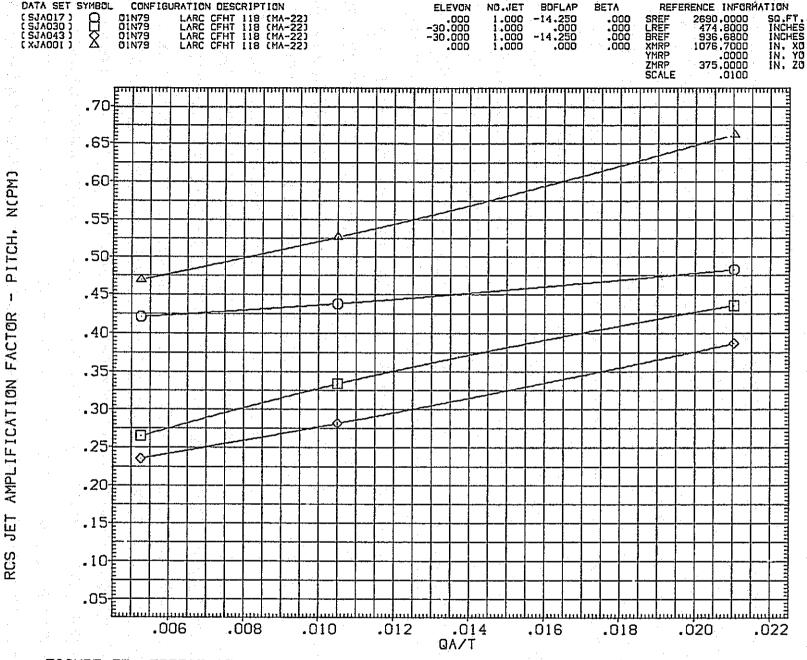


FIGURE 75. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79

(E)ALPHA = 35.00

PAGE 1344

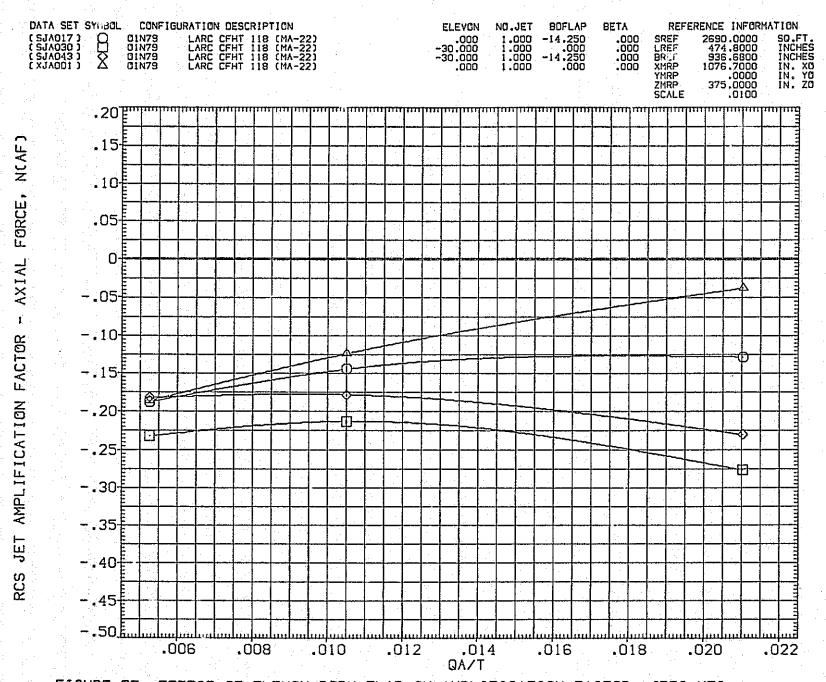


FIGURE 75. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79

[A]ALPHA = -8.00

PAGE 1345

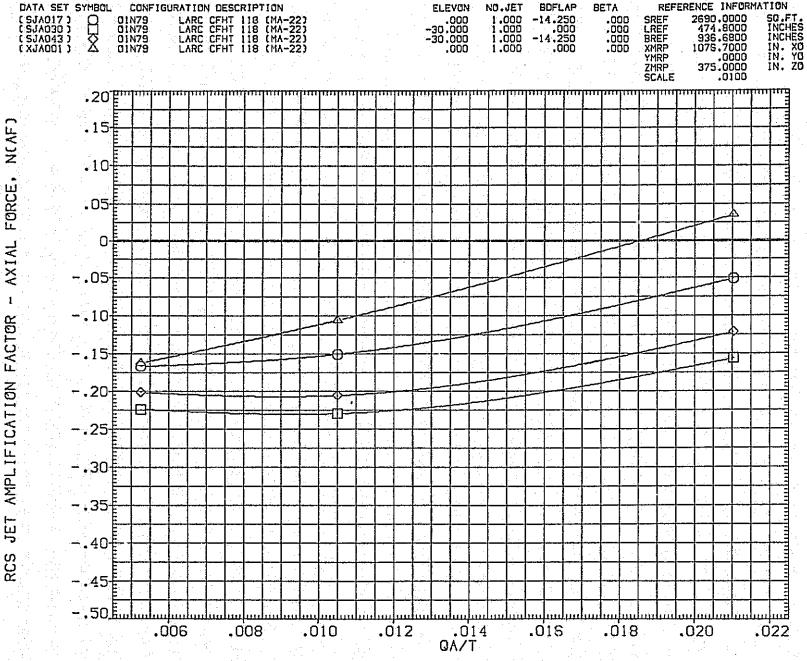


FIGURE 75. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79

(B)ALPHA = .00 PAGE 1346

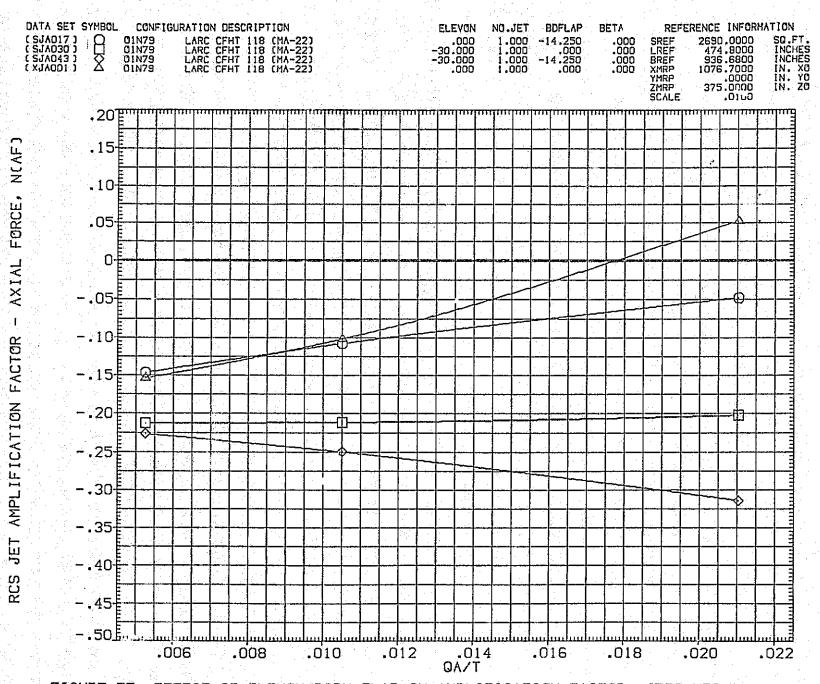


FIGURE 75. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79

(C)ALPHA = 10.00

PAGE 1347

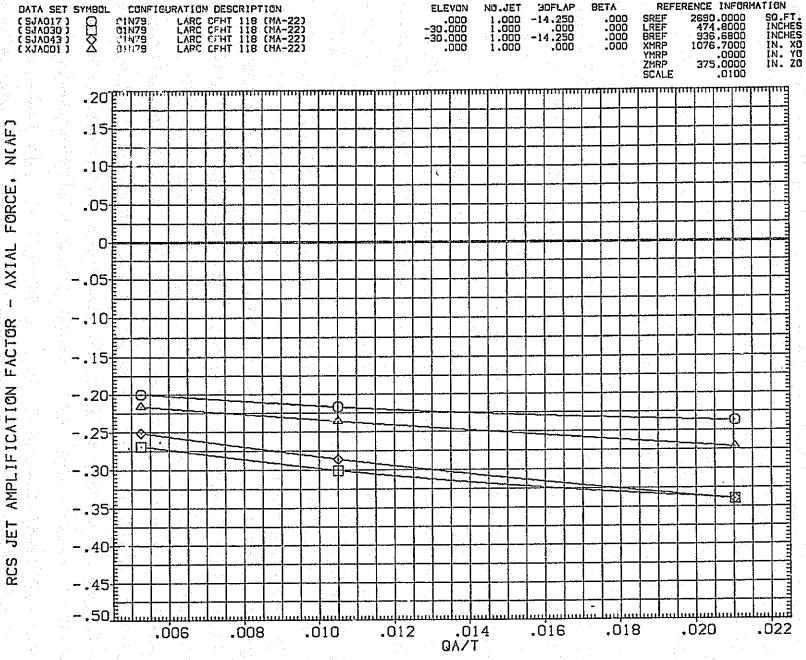


FIGURE 75. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79

[D]ALPHA = 20.00

PAGE 1348

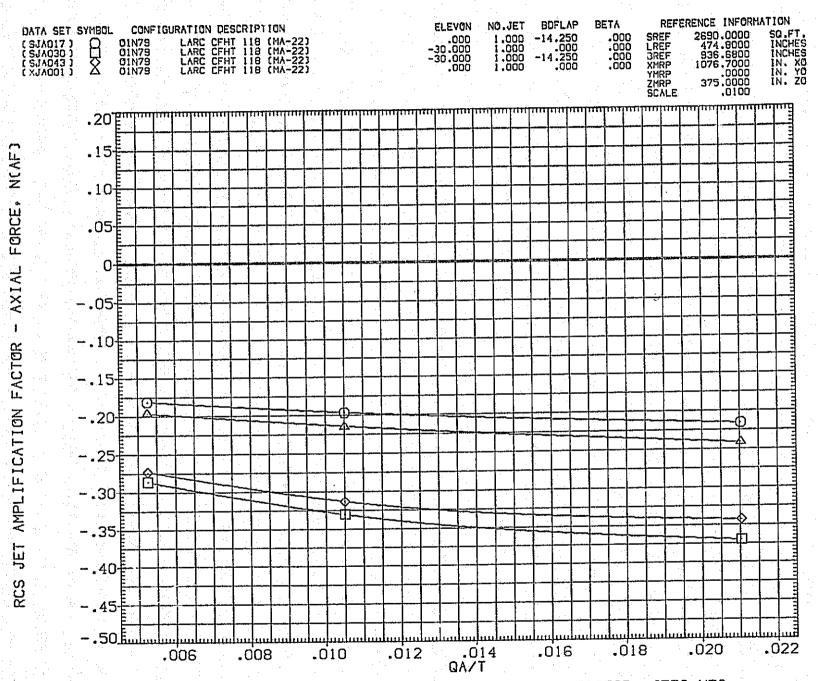


FIGURE 75. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79

PAGE 1349

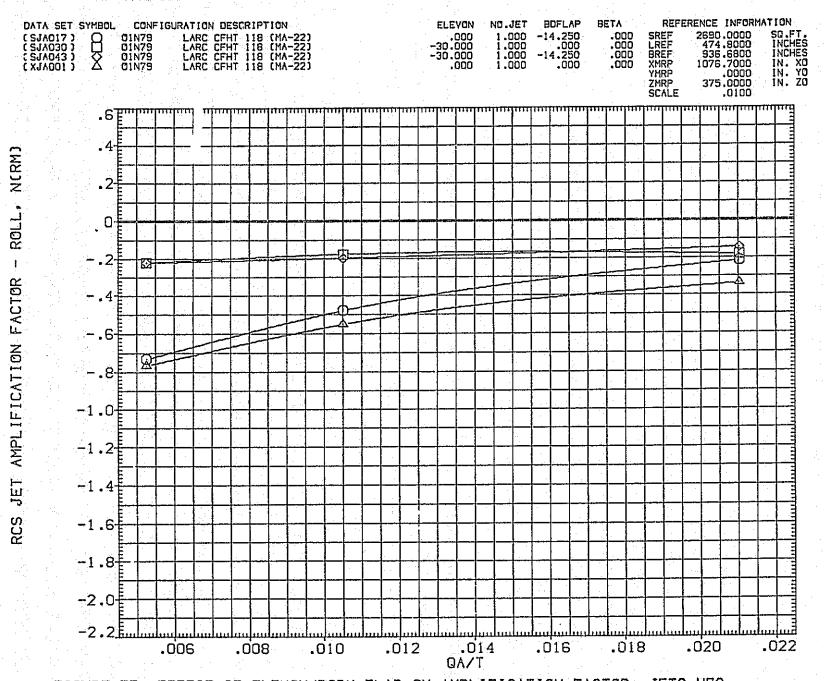


FIGURE 75, EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79

(A)ALPHA = -8.00

PAGE 1350

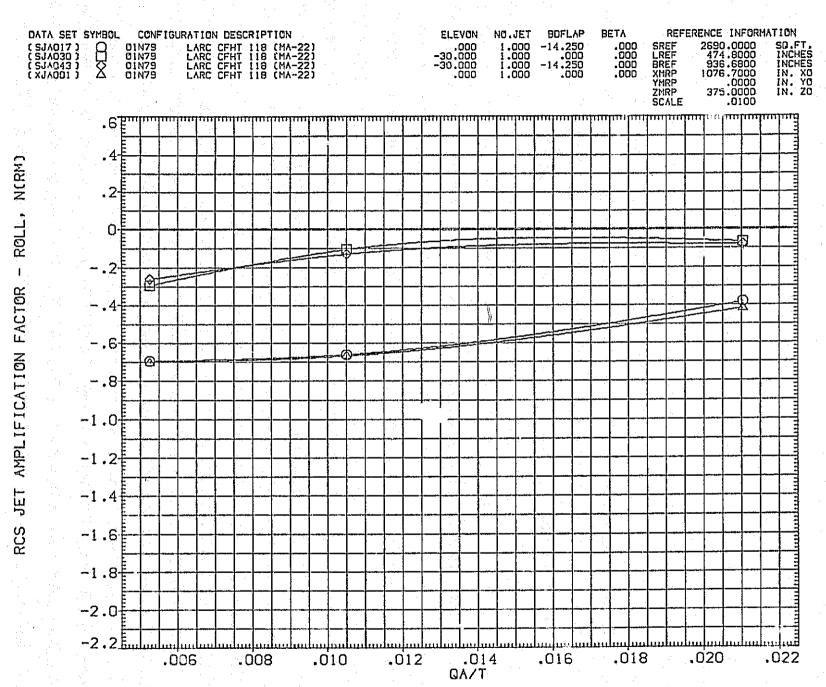


FIGURE 75. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79

(B)ALPHA = .00

PAGE 1351

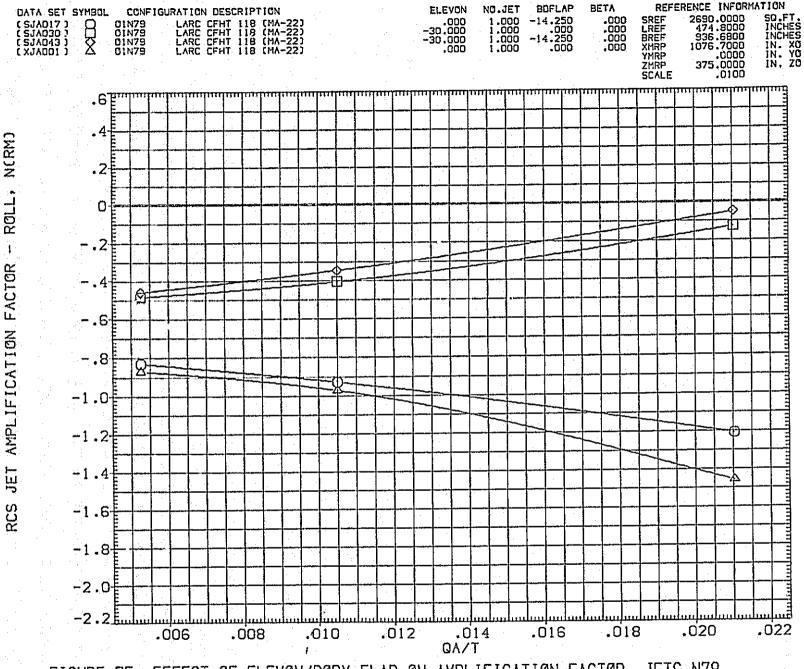


FIGURE 75. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79

(C) ALPHA = 10.00

PAGE 1352

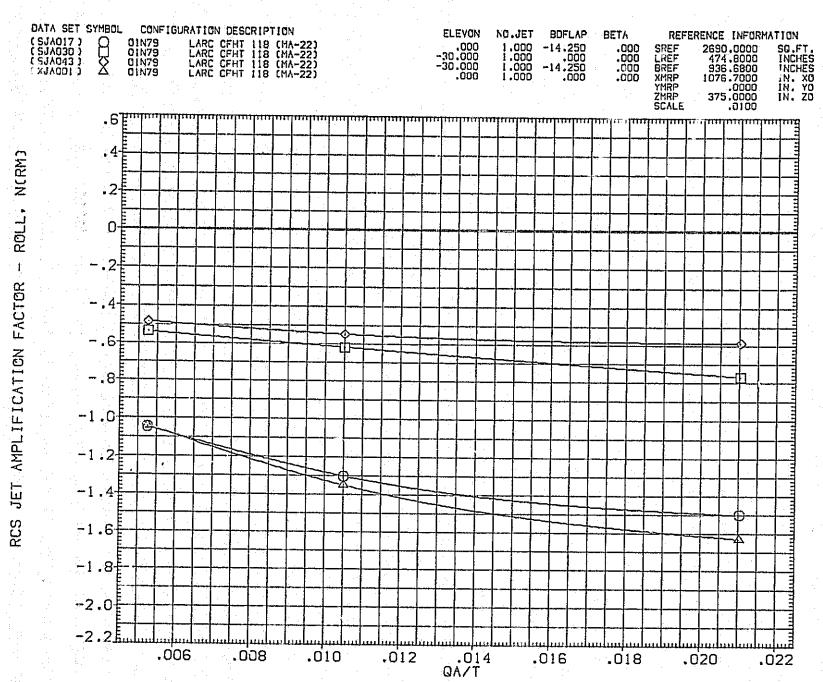


FIGURE 75. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79

(D)ALPHA = 20.00

PAGE 1353

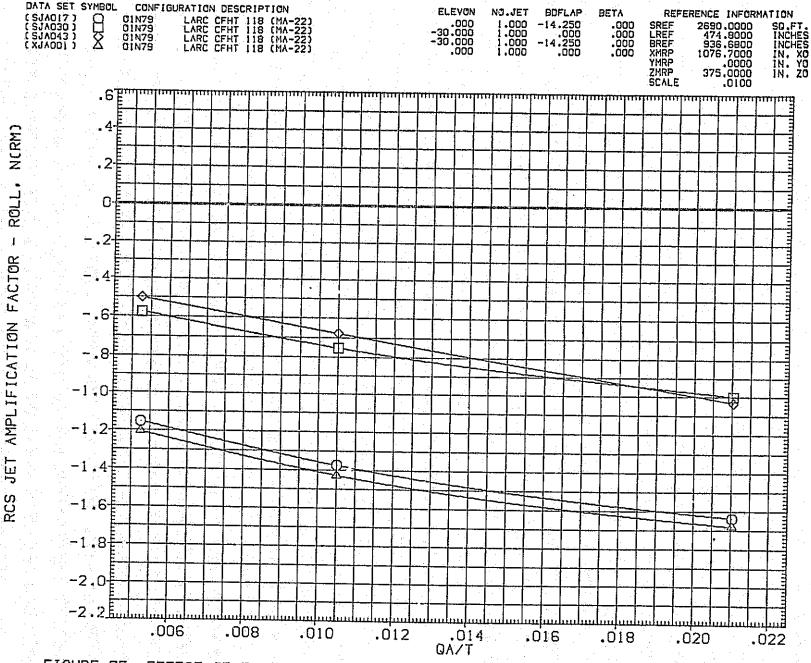


FIGURE 75. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79

(E)ALPHA = 35.00

PAGE 1354

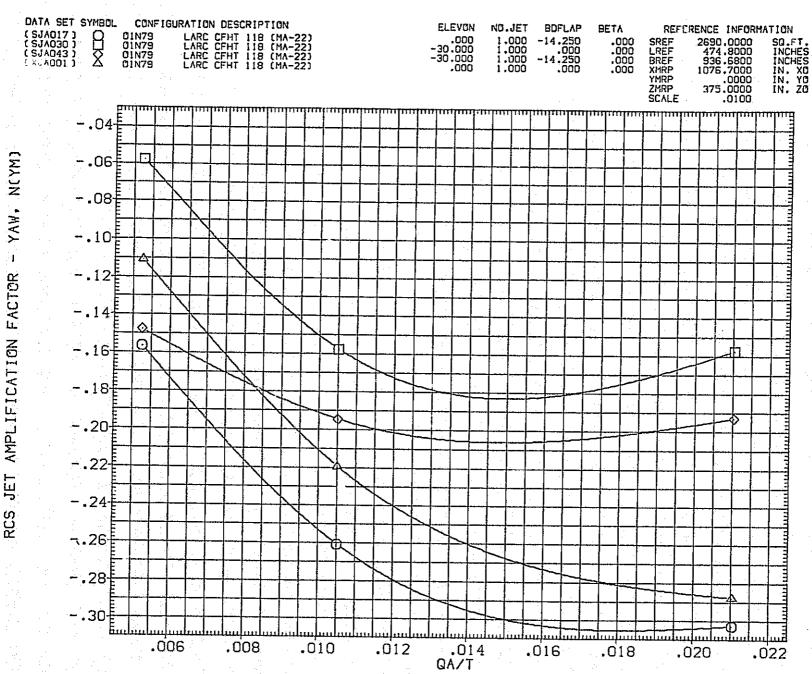


FIGURE 75. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79

[A]ALPHA = -8.00

PAGE

1355

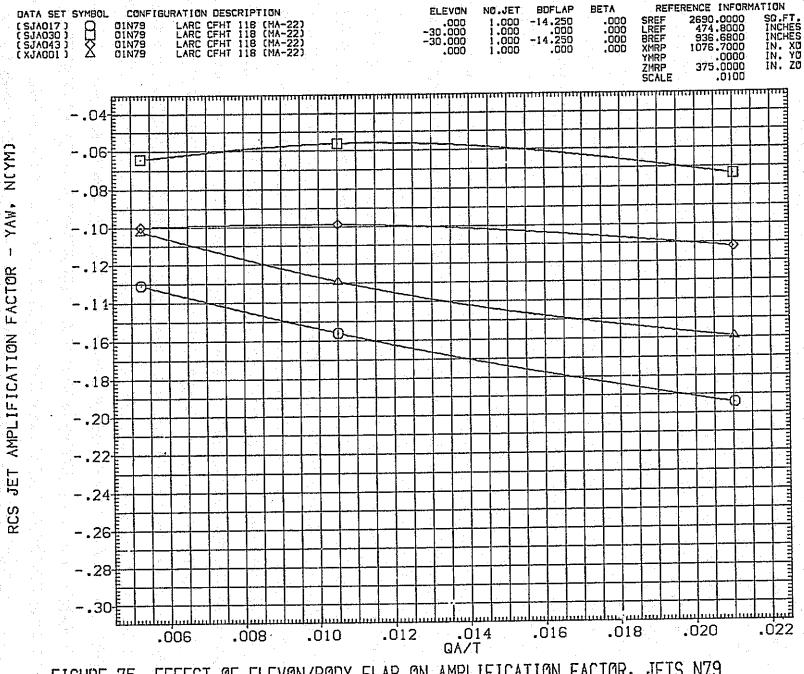


FIGURE 75. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79

(B)ALPHA = .00

PAGE 1356

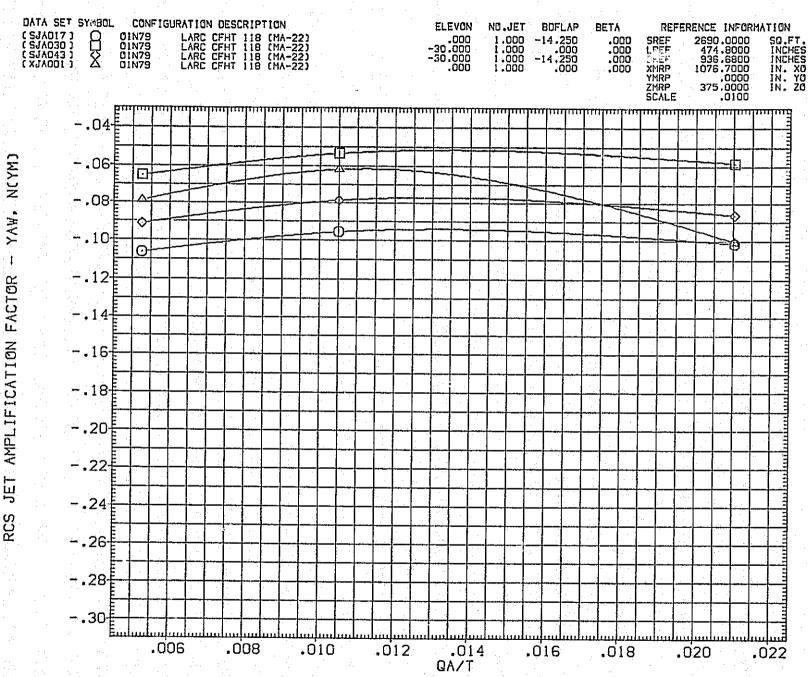


FIGURE 75. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79

(C)ALPHA = 10.00

PAGE 1357

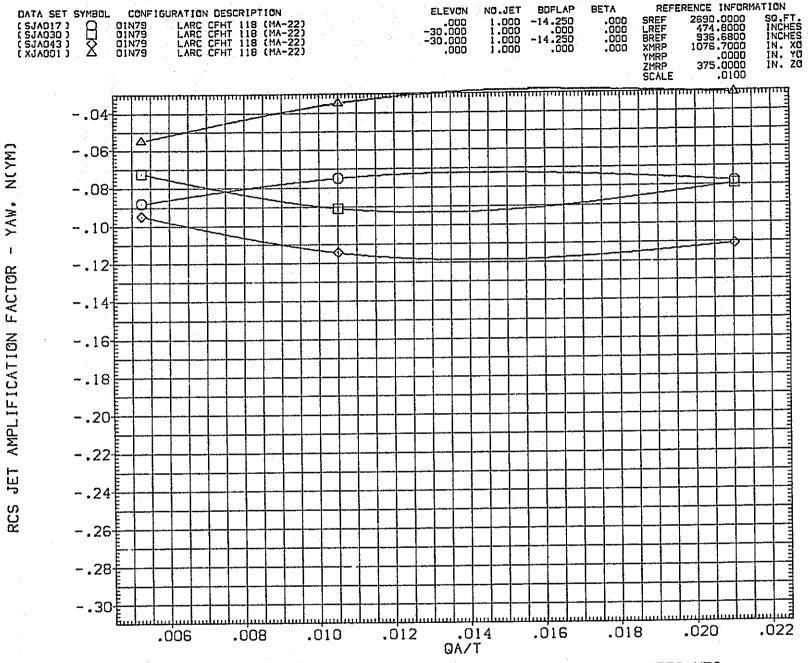


FIGURE 75. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79

(D)ALPHA = 20.00

PAGE 1358

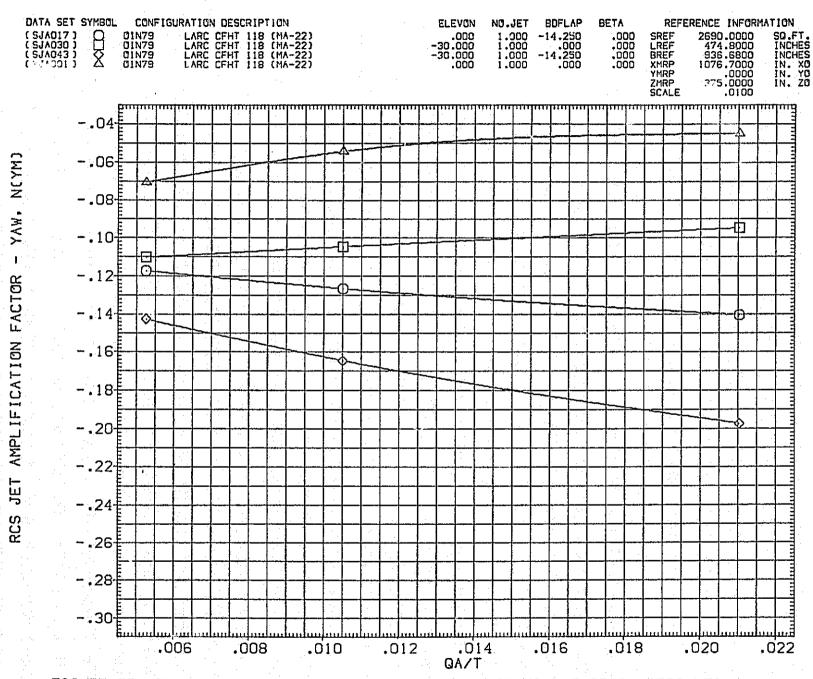


FIGURE 75. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79

(E)ALPHA = 35.00

PAGE 1359

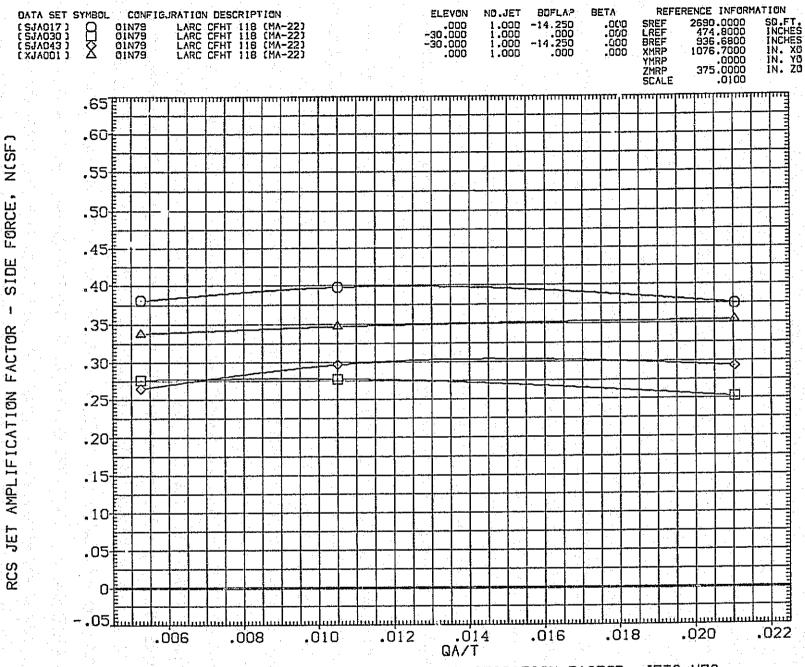


FIGURE 75. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79

(A)ALPHA = -8.00

PAGE 1360

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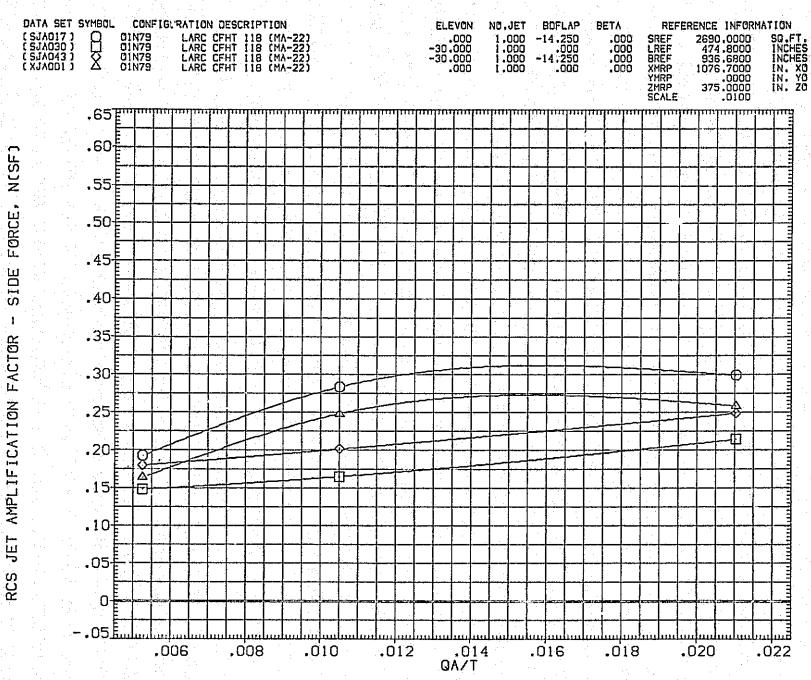


FIGURE 75. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79

(B)ALPHA = .00

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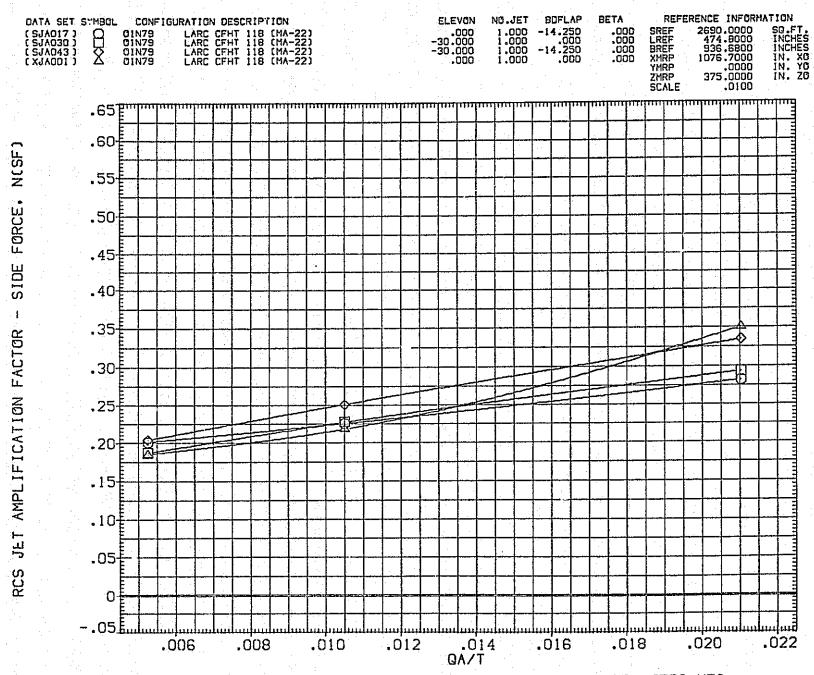


FIGURE 75. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79

(C)ALPHA = 10.00

PAGE 1362

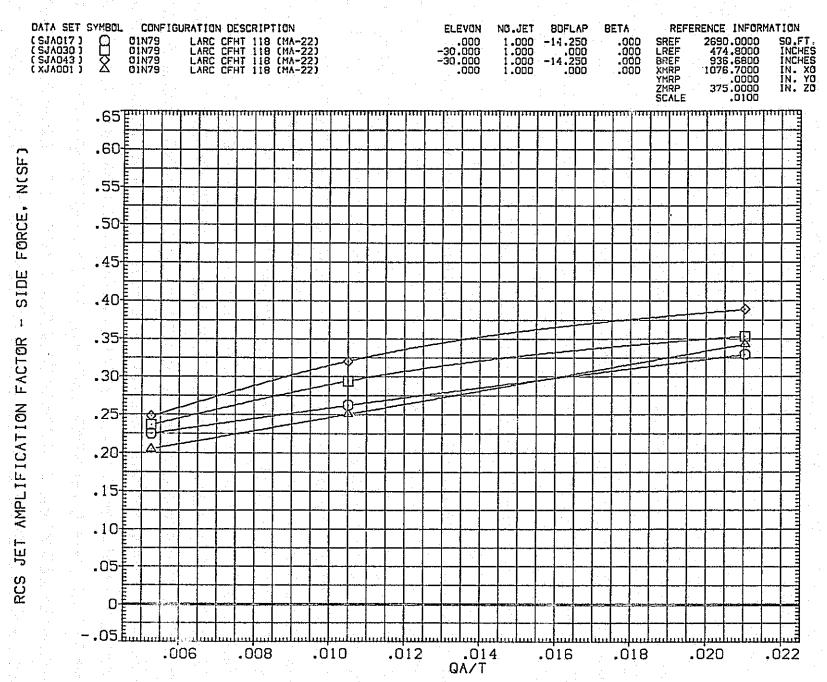


FIGURE 75. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79

(D) ALPHA = 20.00

PAGE 1363

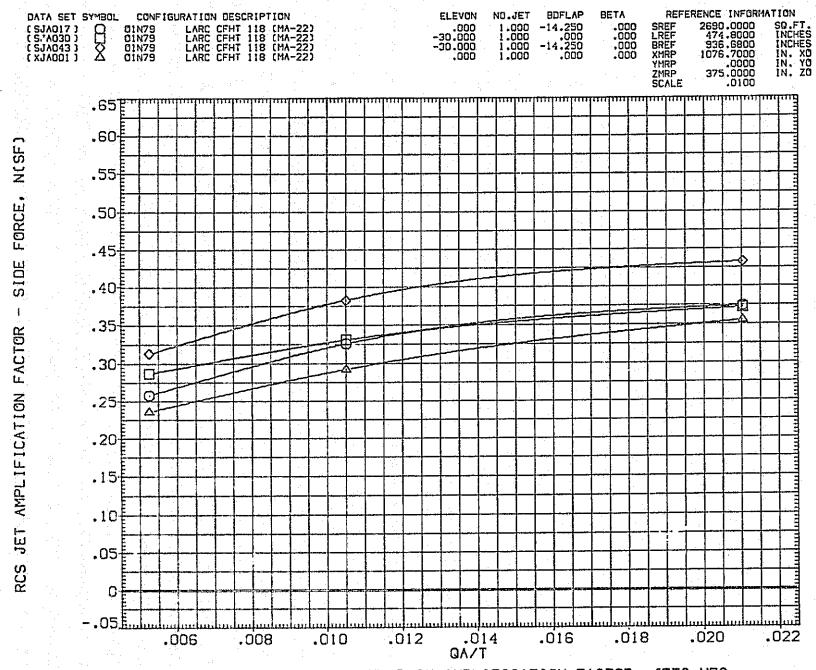


FIGURE 75. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N79

(E)ALPHA = 35.00

PAGE 1364

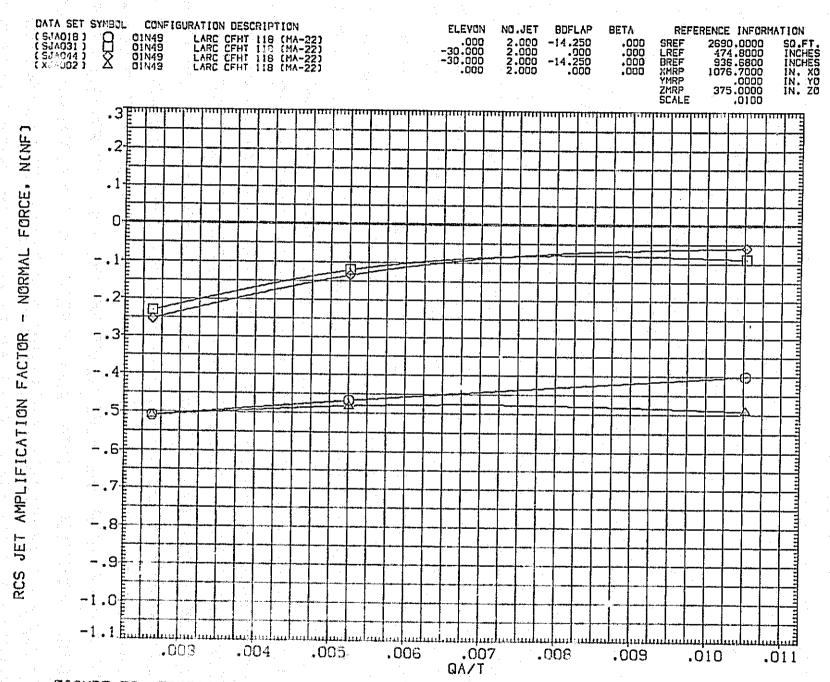


FIGURE 76. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N49

[AJALPHA = -8.00 PAGE 1365

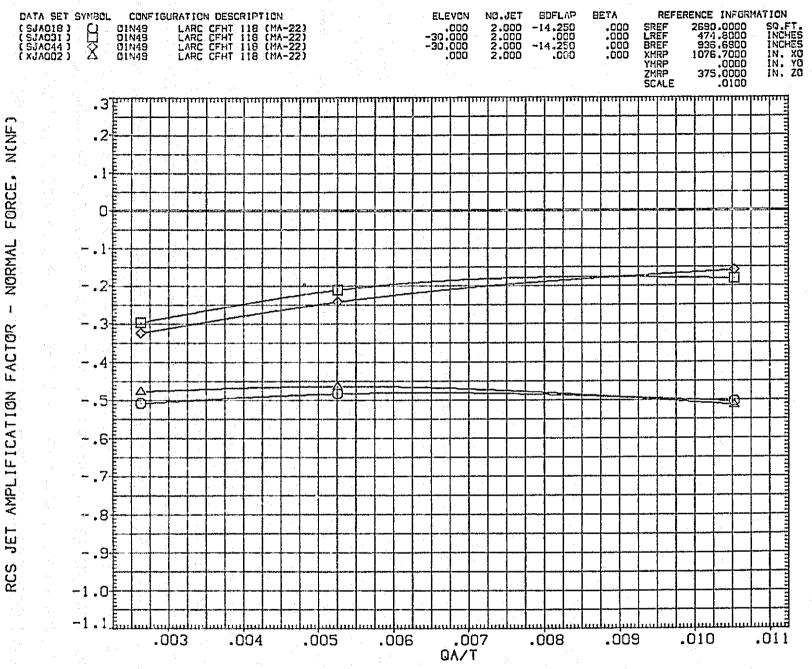


FIGURE 76. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N49

(B)ALPHA = .00

PAGE 1366

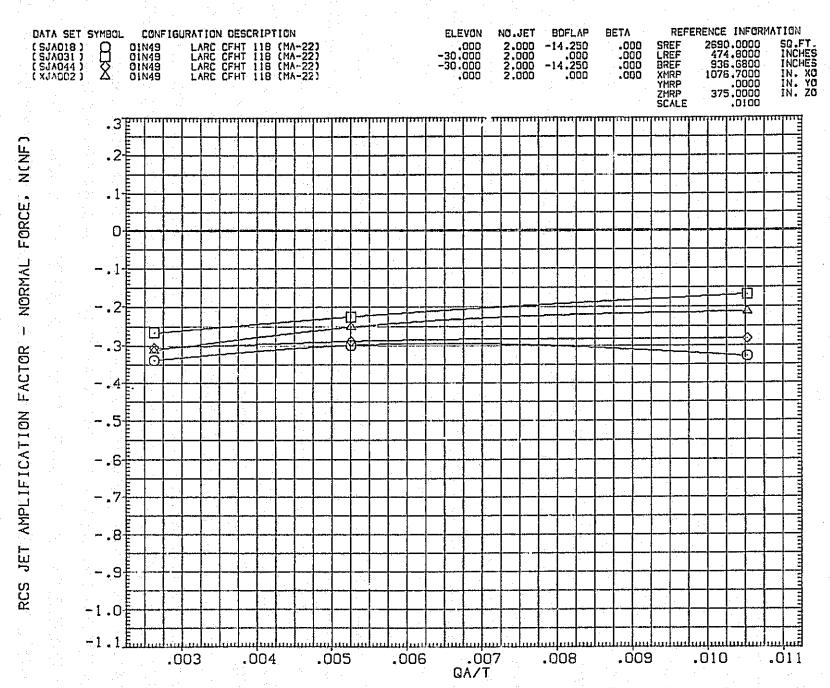


FIGURE 76. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N49

(C) ALPHA = 10.00

PAGE 1367

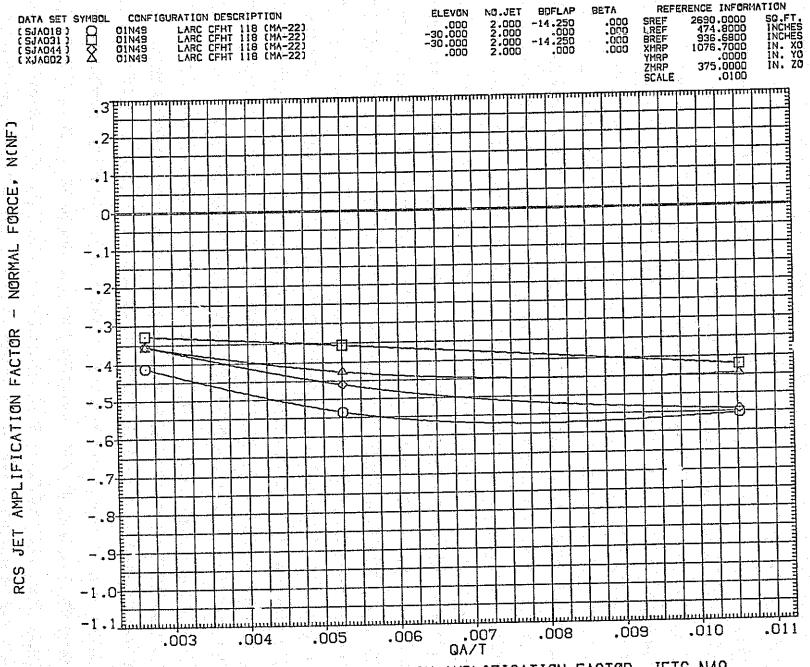


FIGURE 76. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N49

PAGE 1368

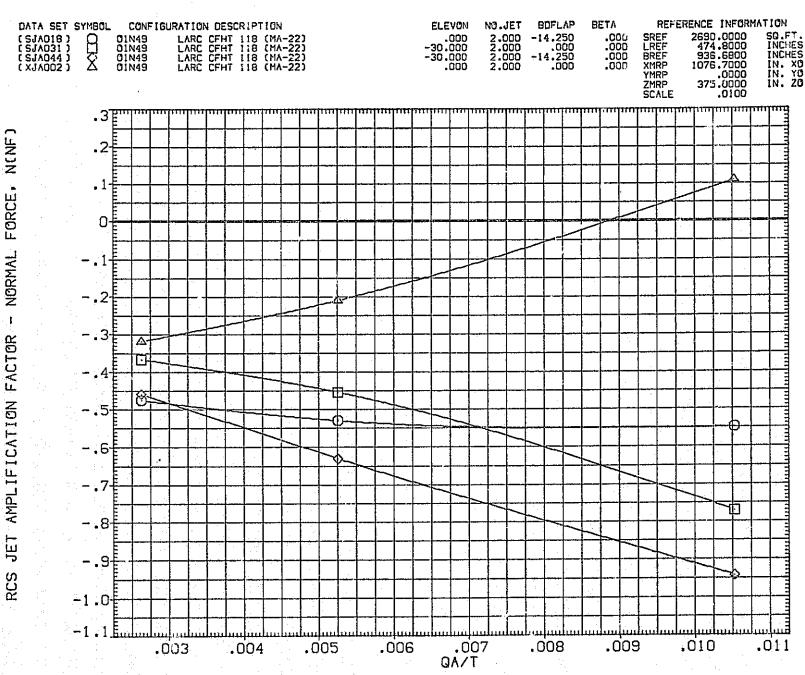


FIGURE 76. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N49

(E)ALPHA = 35.00

PAGE

1369

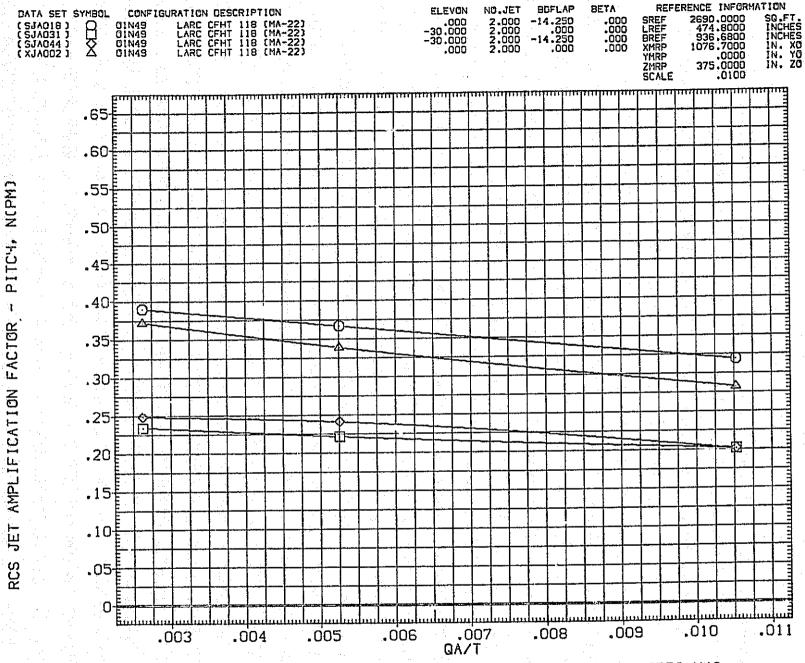


FIGURE 76. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N49

(A)ALPHA = -8.00 PAGE 1370

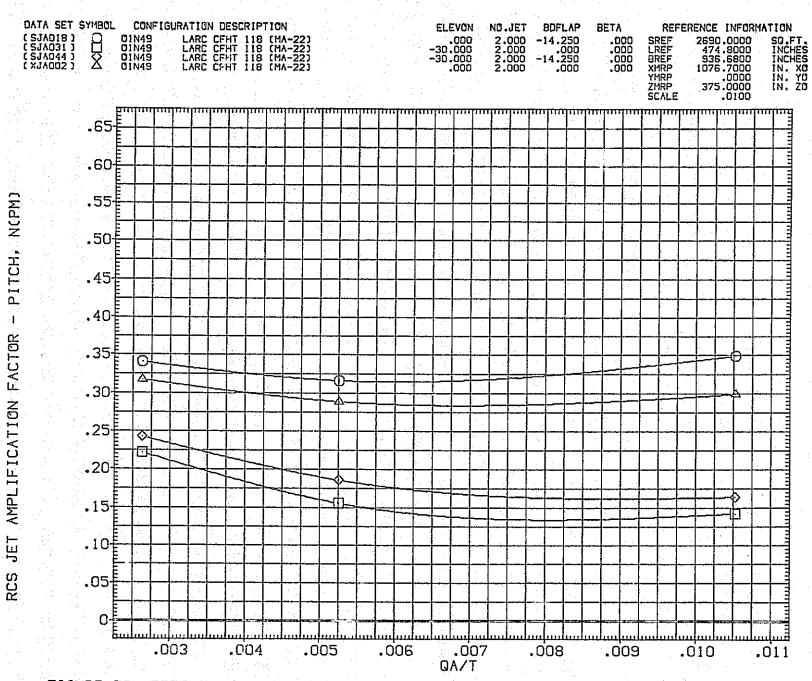


FIGURE 76. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N49

(B)ALPHA = .00

PAGE 1371

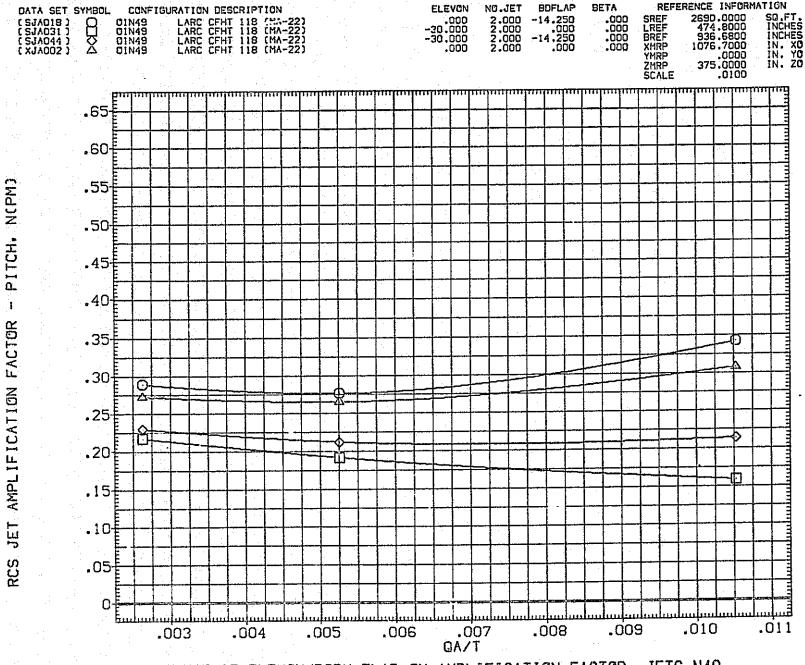


FIGURE 76. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N49

COALPHA = 10.00

PAGE 1372

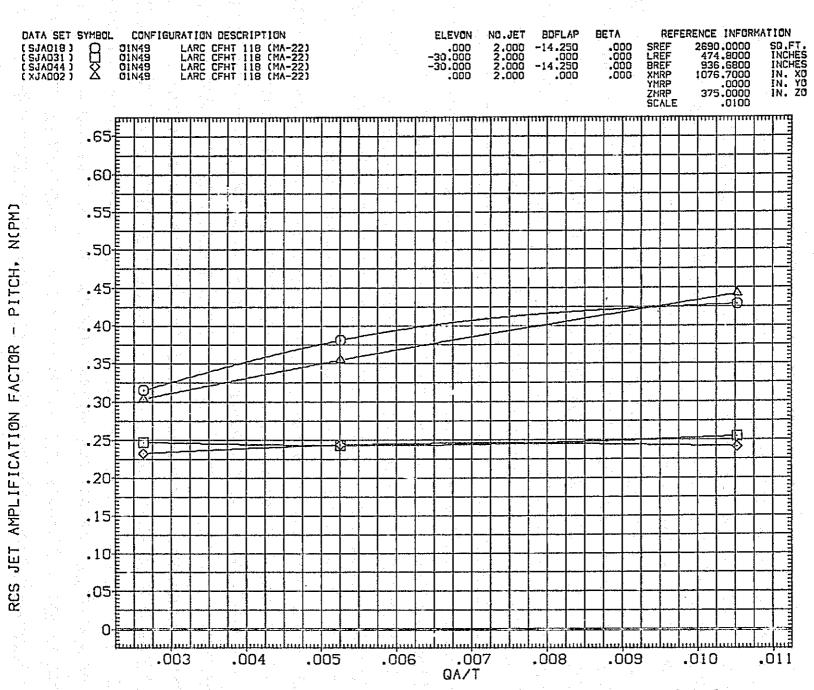


FIGURE 76. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N49

(D)ALPHA = 20.00

PAGE 1373

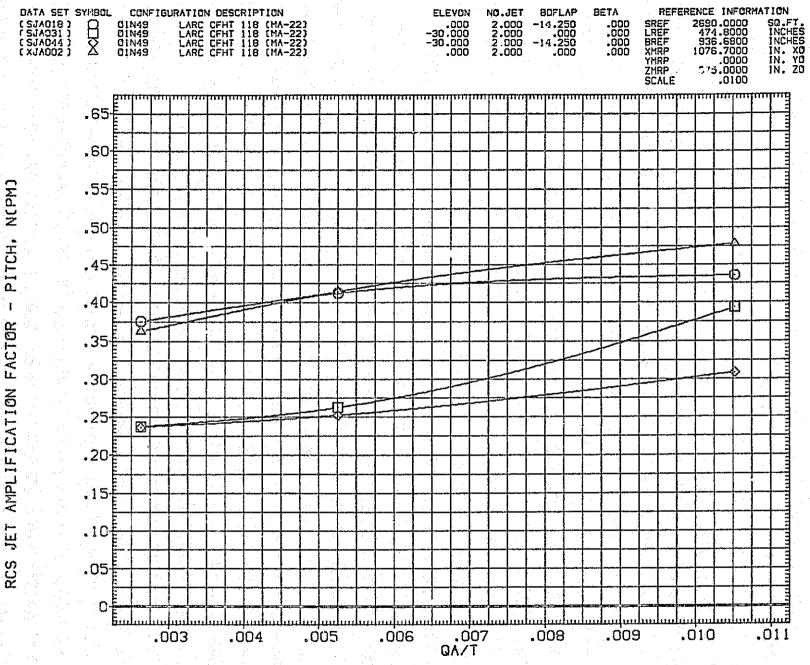


FIGURE 76. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N49

(E)ALPHA = 35.00

PAGE 1374

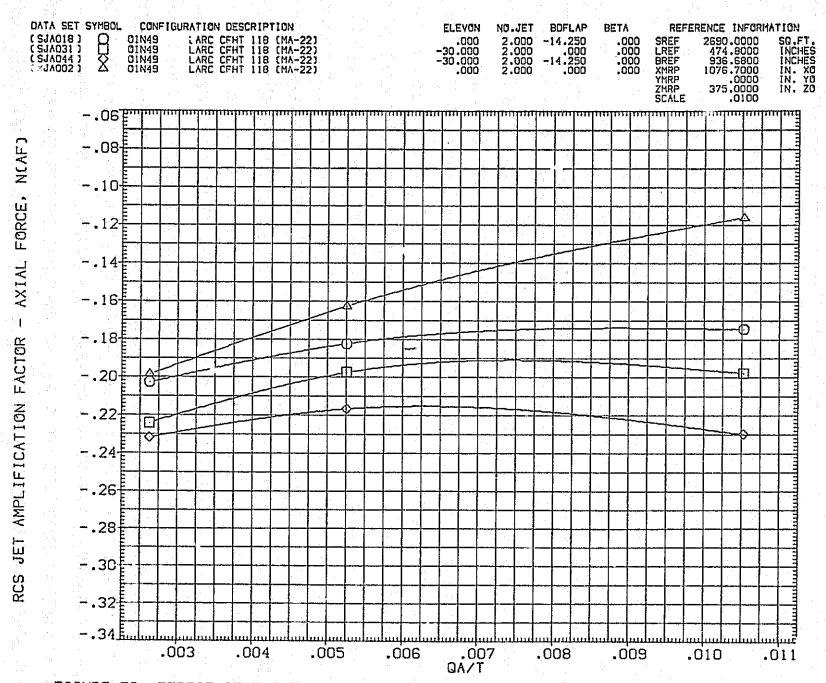


FIGURE 76. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N49

CADALPHA = -8.00

PAGE 1375

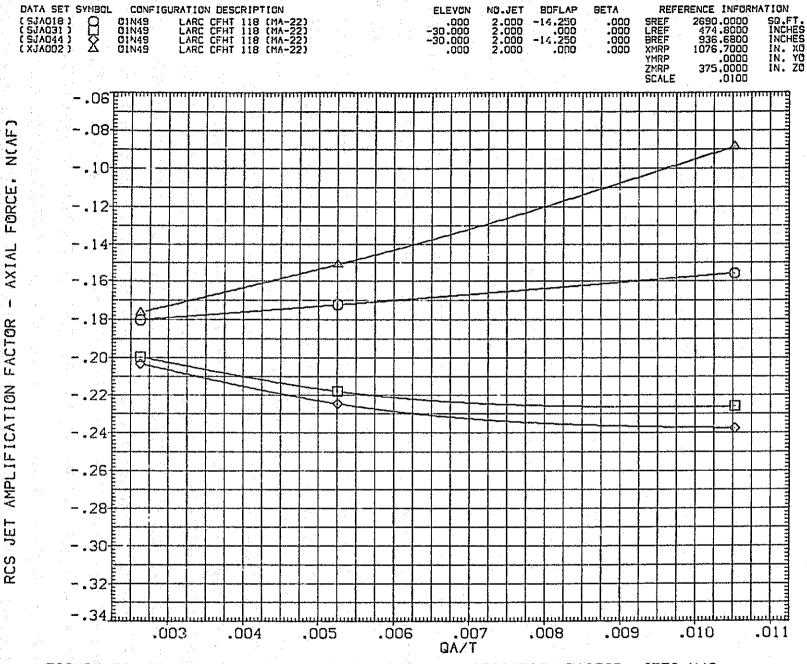


FIGURE 76. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N49

(B) ALPHA = .00 PAGE 1376

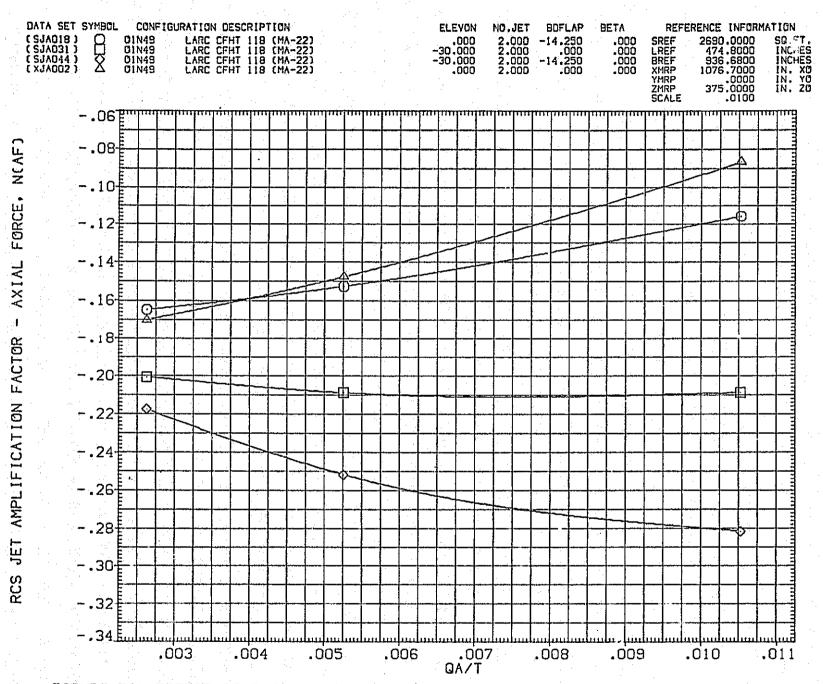


FIGURE 76. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N49

(C)ALPHA = 10.00 PAGE 1377

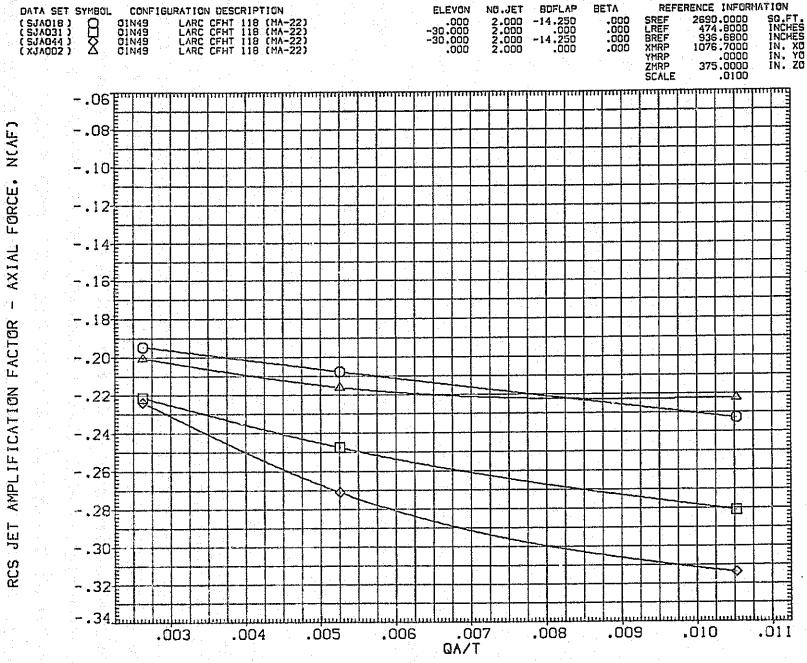


FIGURE 76. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N49

CD)ALPHA = 20.00

PAGE 1378

1379

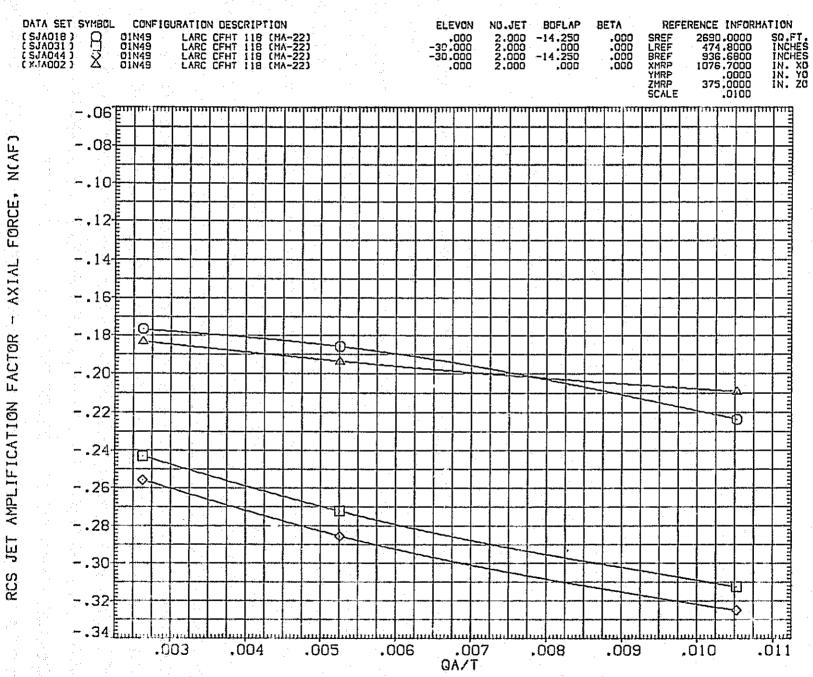


FIGURE 76. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N49

(E)ALPHA = 35.00

PAGE

FIGURE 76. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N49

[A]ALPHA = -8.00

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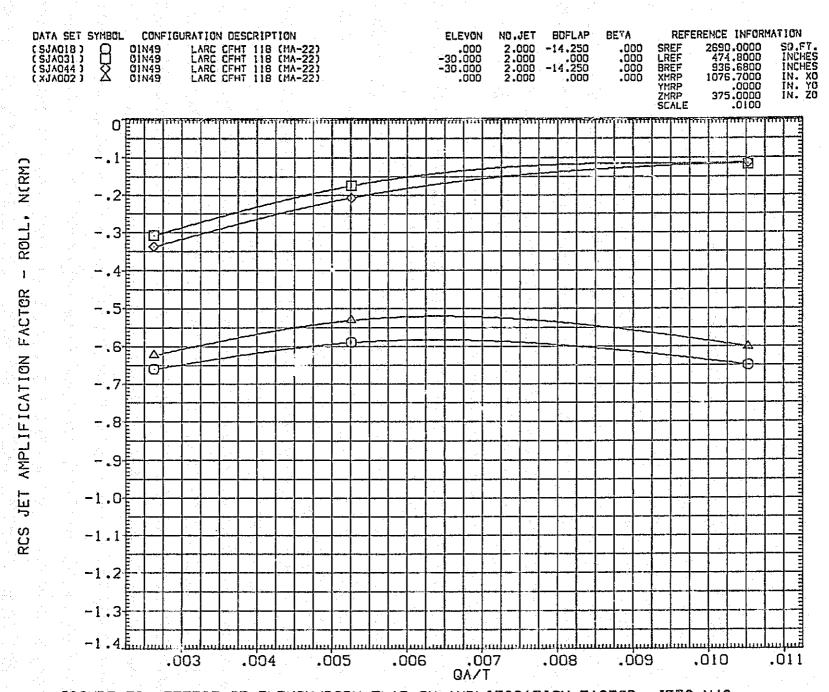


FIGURE 76. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N49

(B) ALPHA = .00

PAGE 1381

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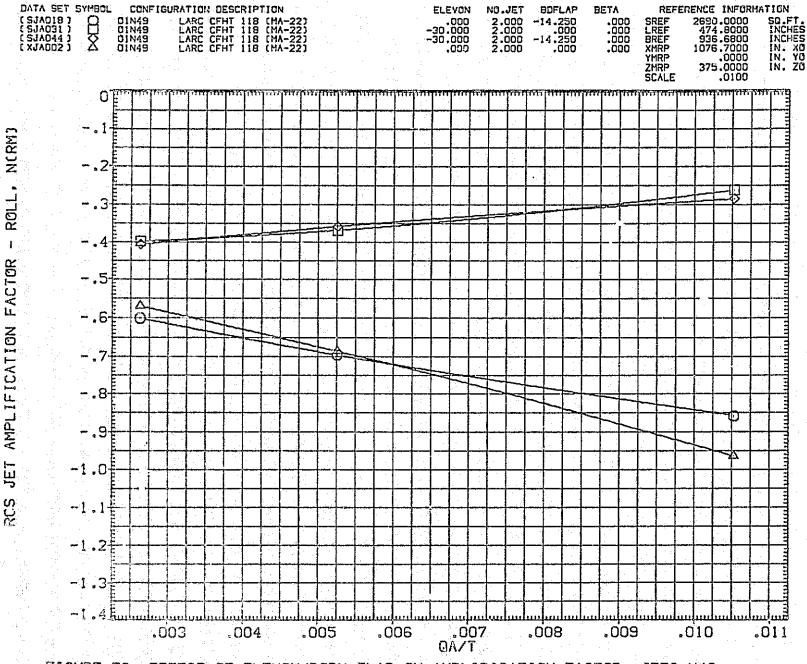


FIGURE 76. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N49

(C)ALPHA = 10.00

PAGE 1382

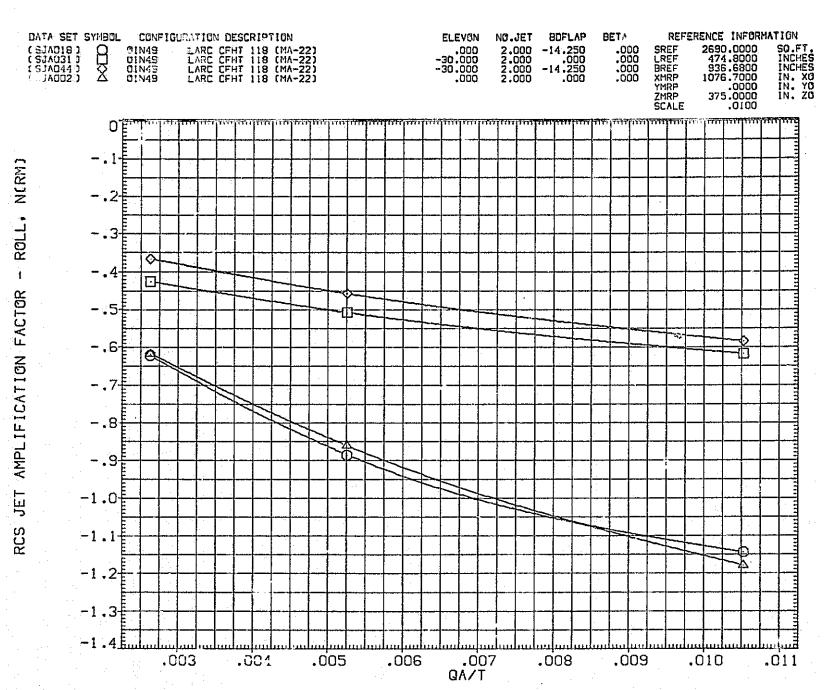


FIGURE 76. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N49

(D)ALPHA = 20.00 PAGE 1383

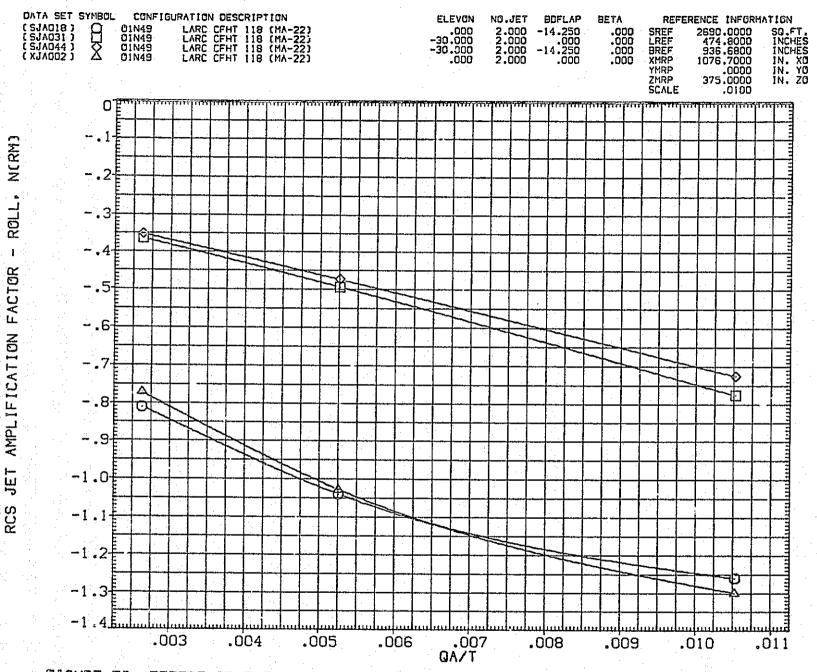


FIGURE 76. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N49
(E)ALPHA = 35.00
PAGE 1384



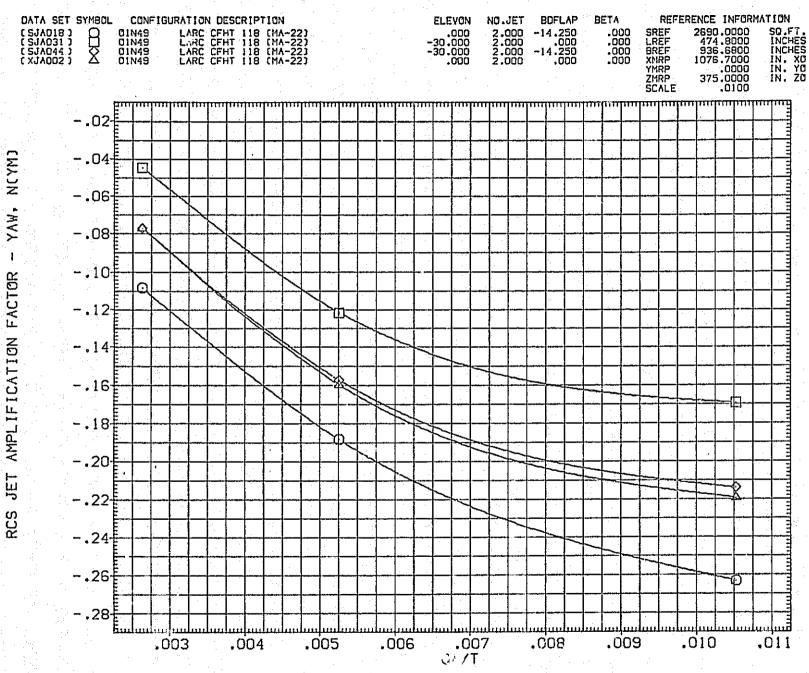


FIGURE 76. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N49

[A]ALPHA = -8.00

PAGE 1385

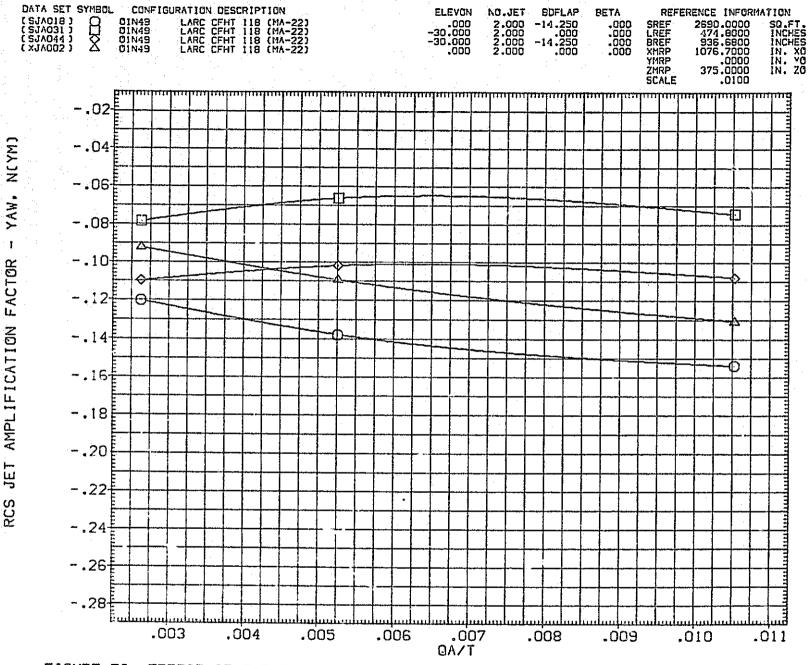


FIGURE 76. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N49

(B)ALPHA = .00

PAGE 1386

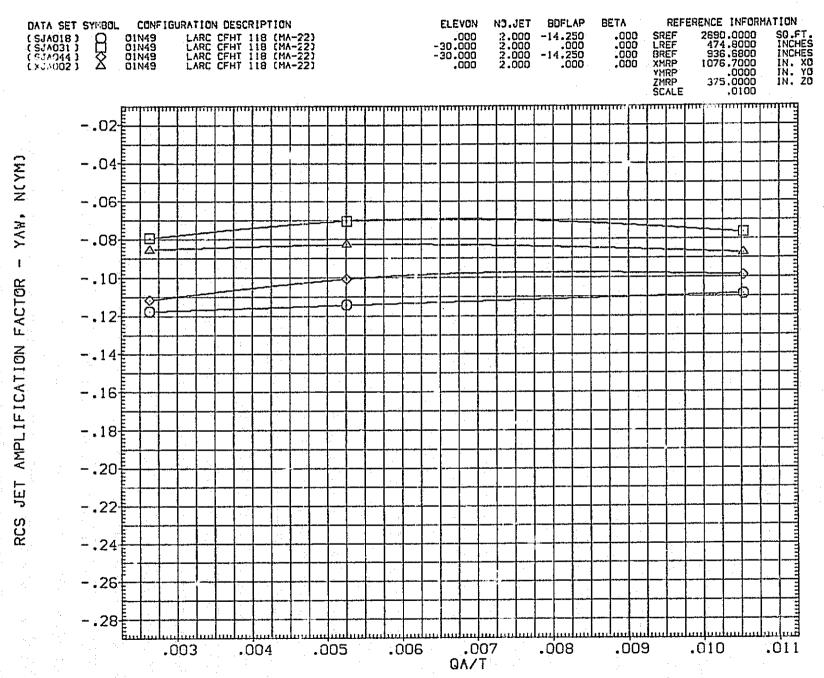


FIGURE 76. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N49

[C]ALPHA = 10.00

PAGE 1387

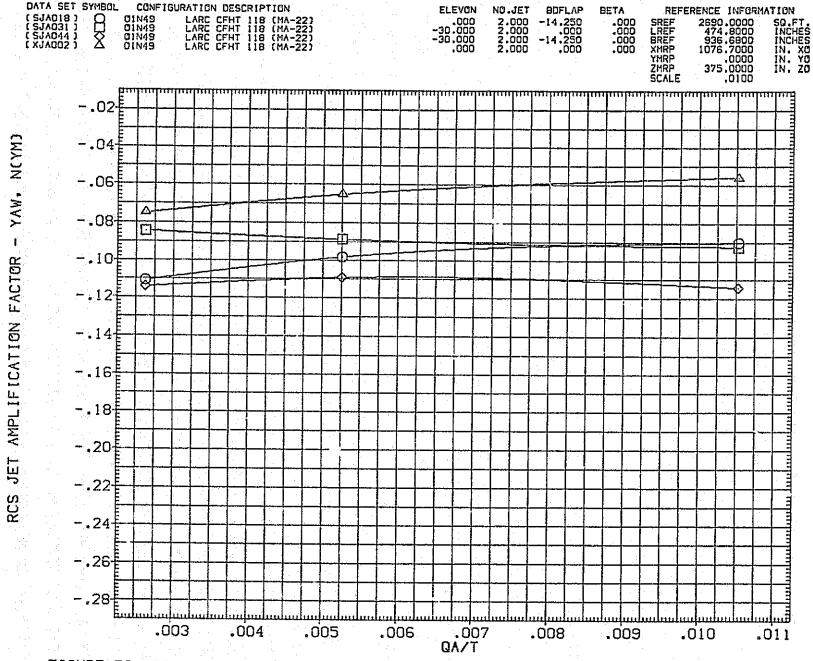


FIGURE 76. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N49

CD)ALPHA = 20.00

PAGE 1388

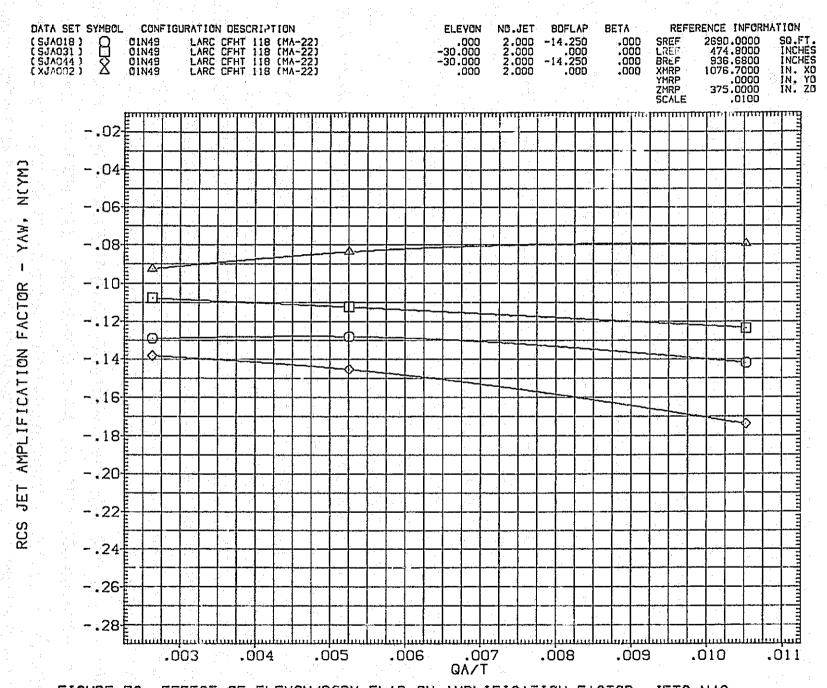


FIGURE 76. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N49

(E)ALPHA = 35.00

PAGE 1389

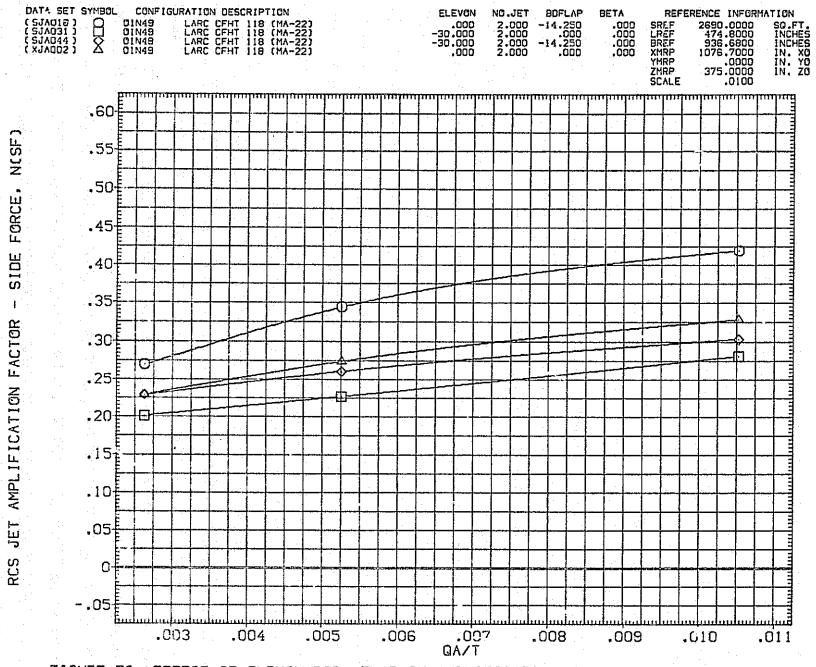
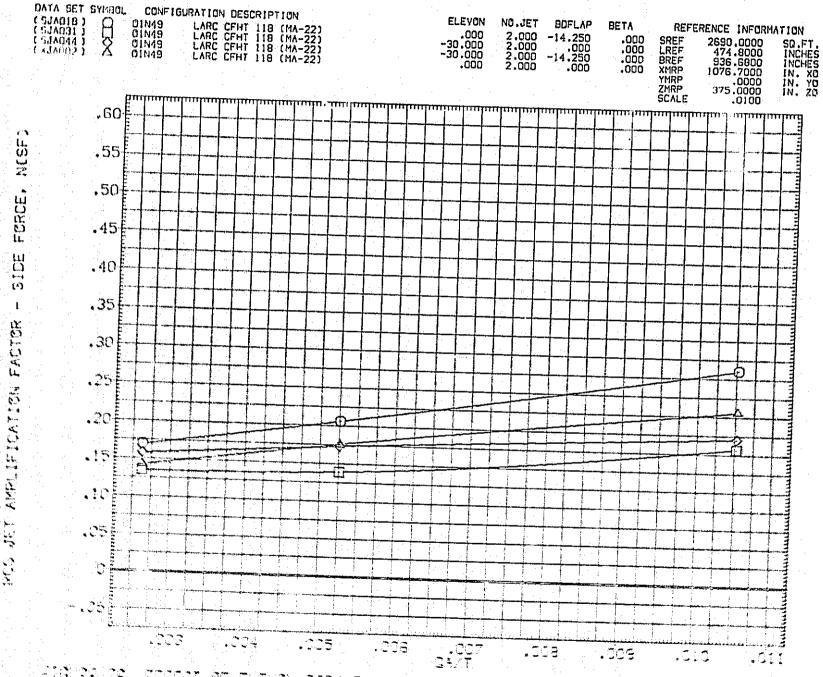


FIGURE 76. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N49

[A]ALPHA = -8.00

PAGE 1390



SET ALPEN AMELIFICATION FACTOR JETS NAS

PAGE :33:

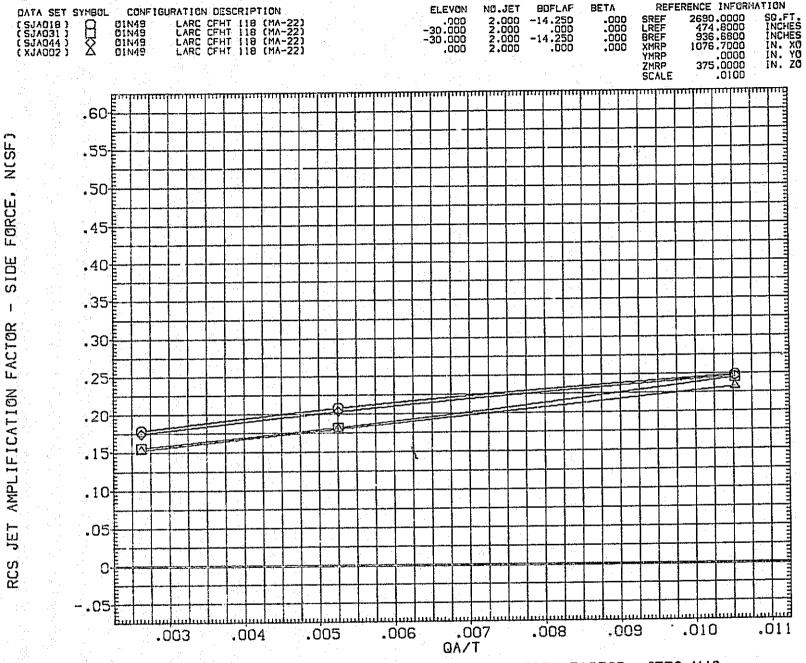


FIGURE 76. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N49

PAGE 1392

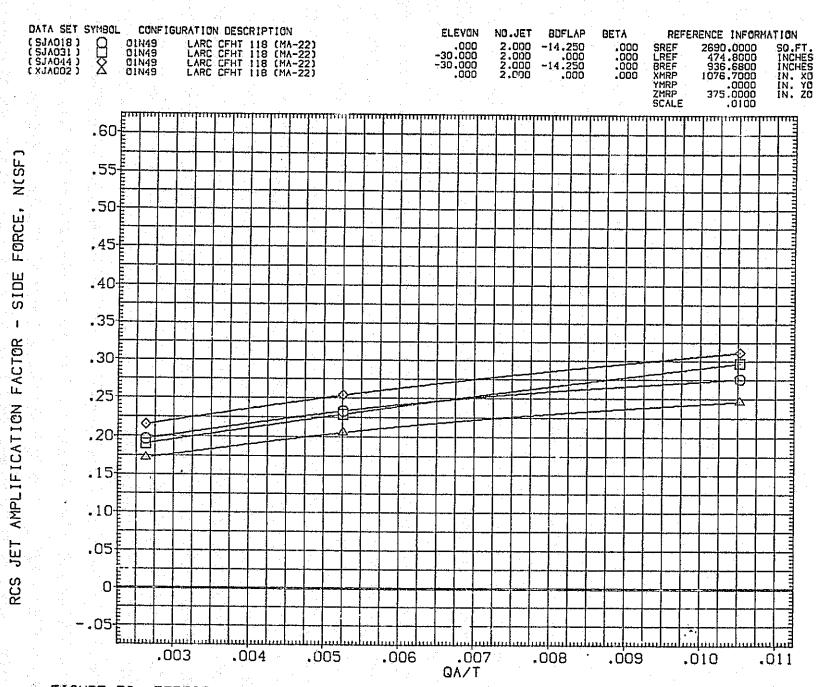


FIGURE 76. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N49

CD)ALPHA = 20.00

PAGE 1393

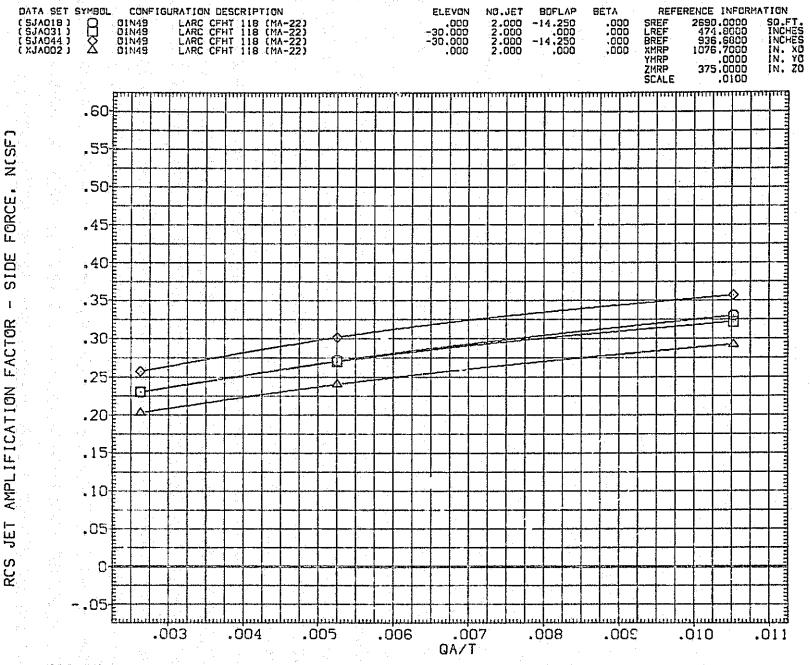


FIGURE 76. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N49

(E)ALPHA = 35.00

PAGE 1394

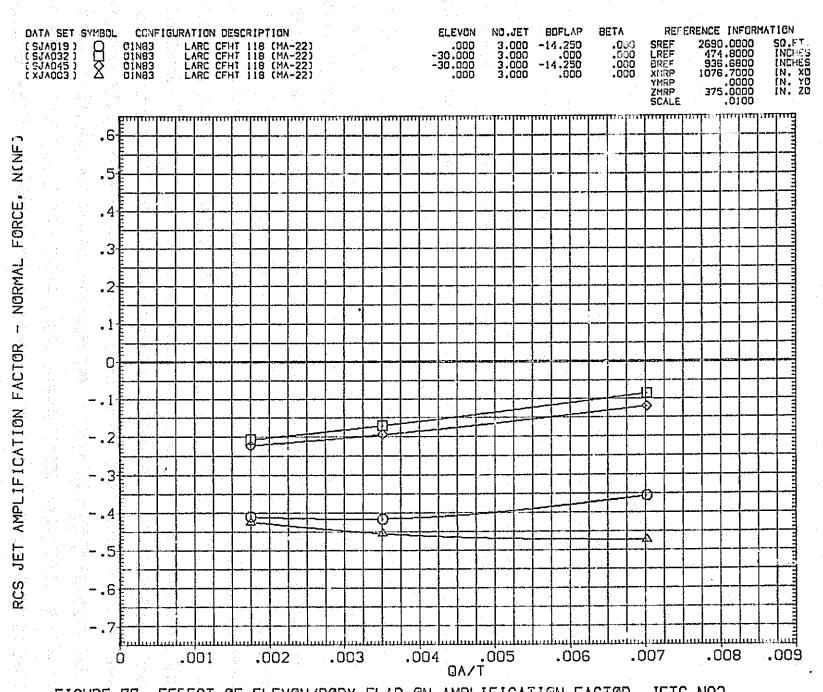


FIGURE 77. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR. JETS N83

[A]ALPHA = -8.00

PAGE 1395

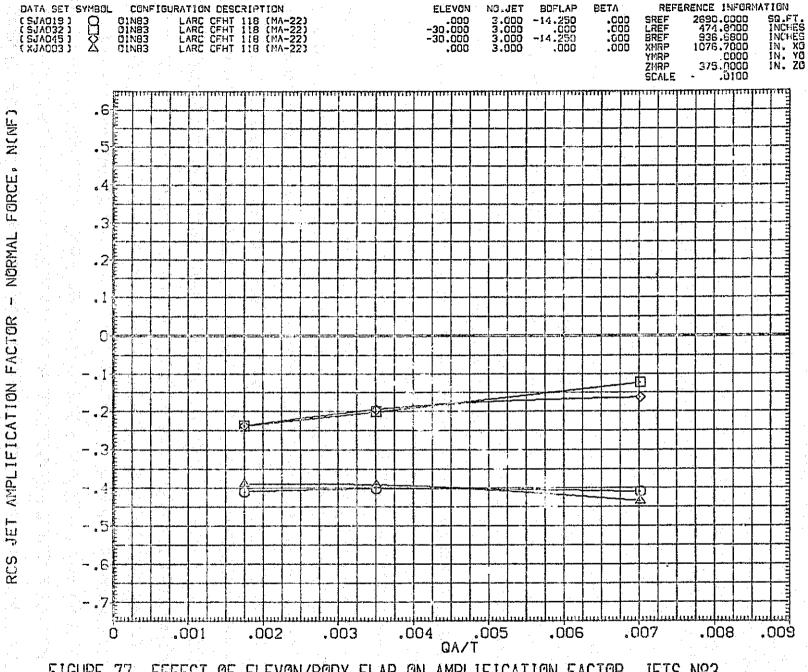


FIGURE 77. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N83

(B)ALPHA = .00

PAGE 1396

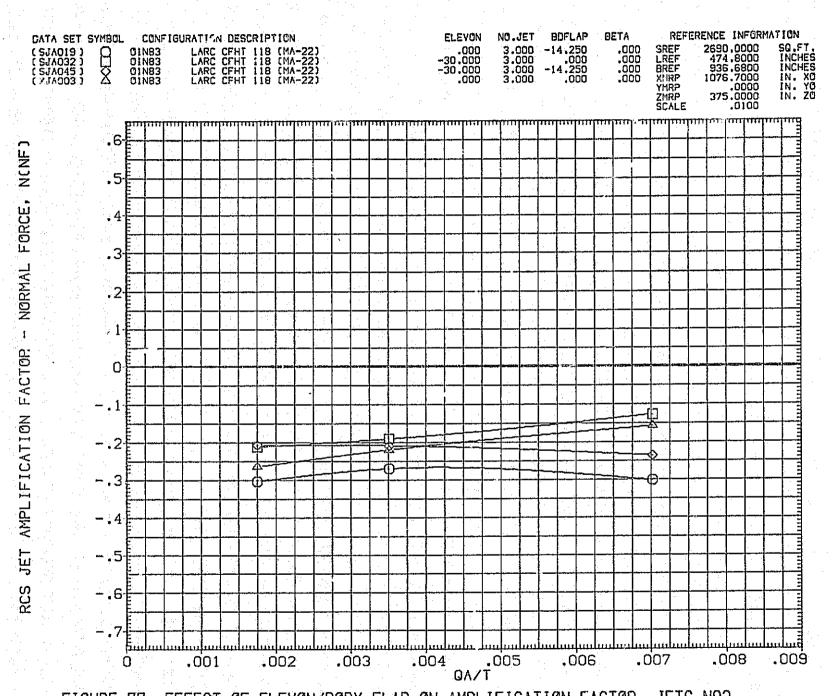


FIGURE 77. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N83

(C)ALPHA = 10.00

PAGE 1397

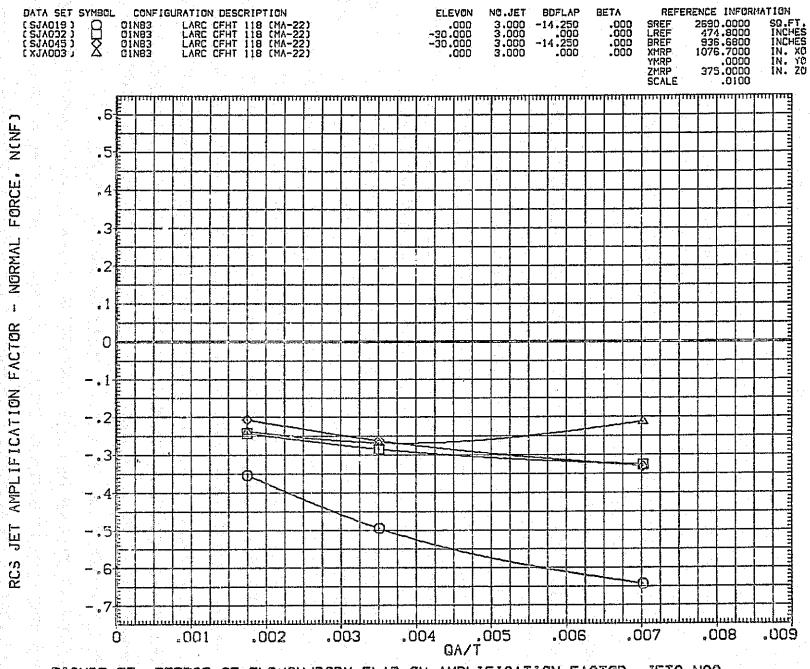


FIGURE 77. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N83

CD)ALPHA = 20.00

PAGE 1398



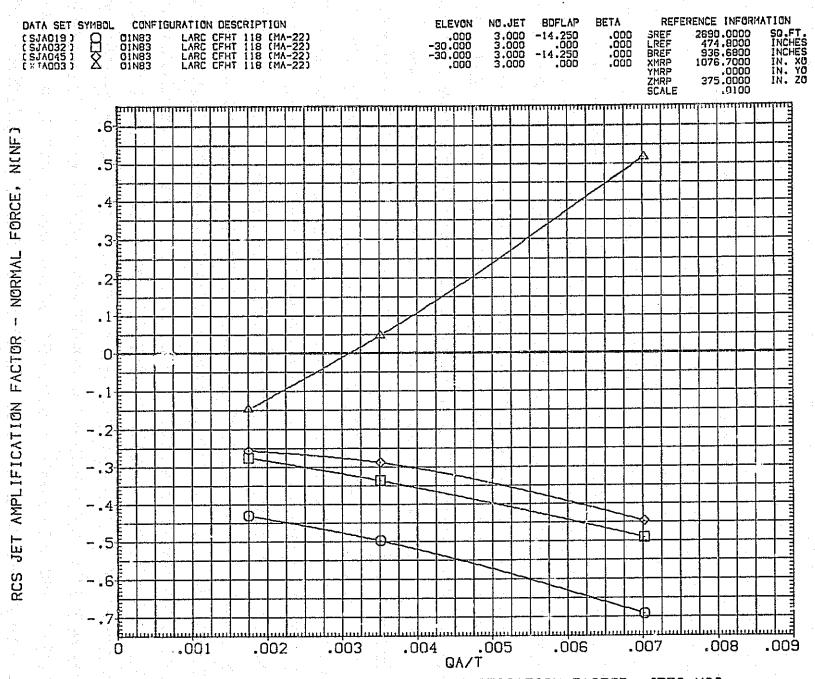


FIGURE 77. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N83

(E)ALPHA = 35.00

PAGE 1399

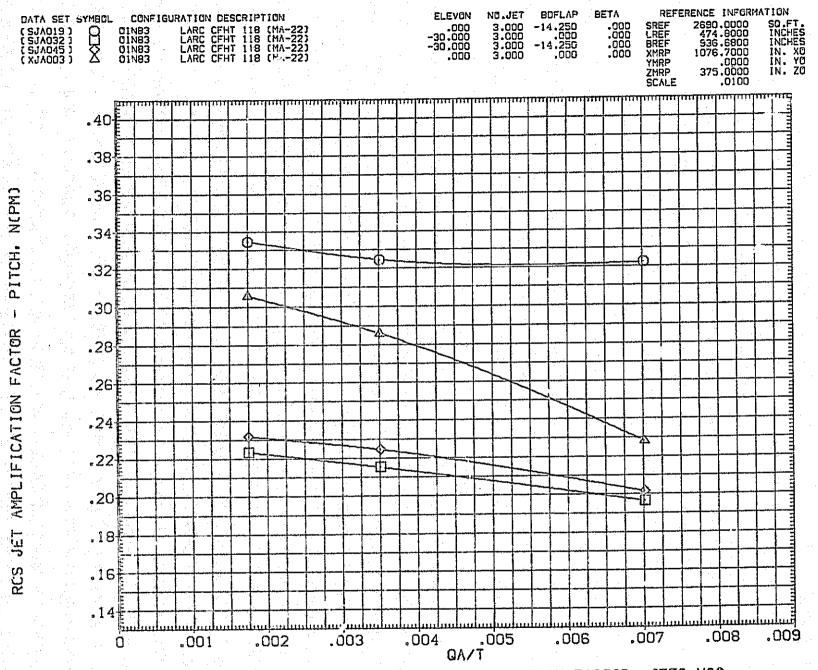
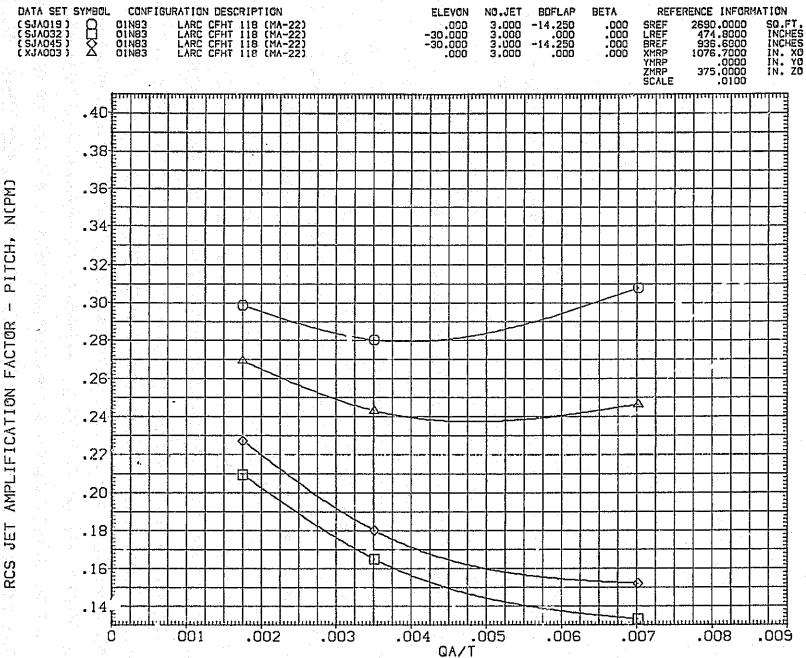


FIGURE 77. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N83

(A)ALPHA = -8.00

PAGE 1400





FIGUN 77. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N83

(B)ALPHA = .00

PAGE 1401

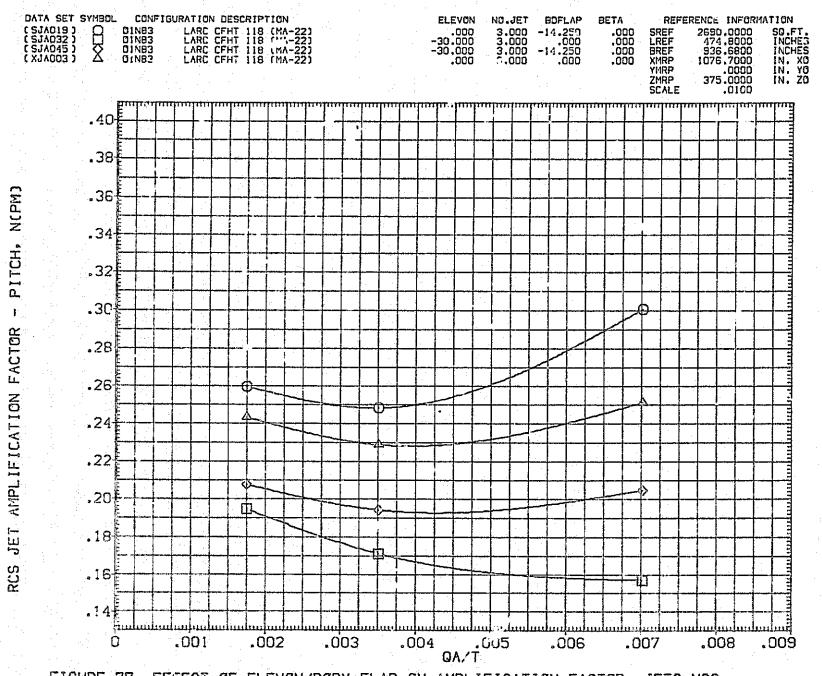


FIGURE 77. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N83

(C)ALPHA = 10.00

PAGE 1402



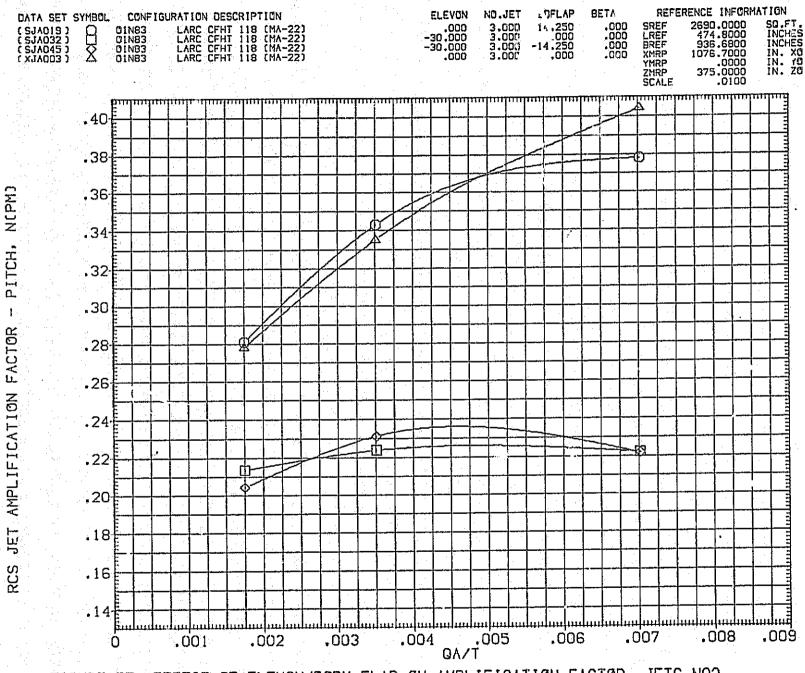


FIGURE 77. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N83

(D)ALPHA = 20.00

PAGE 1403

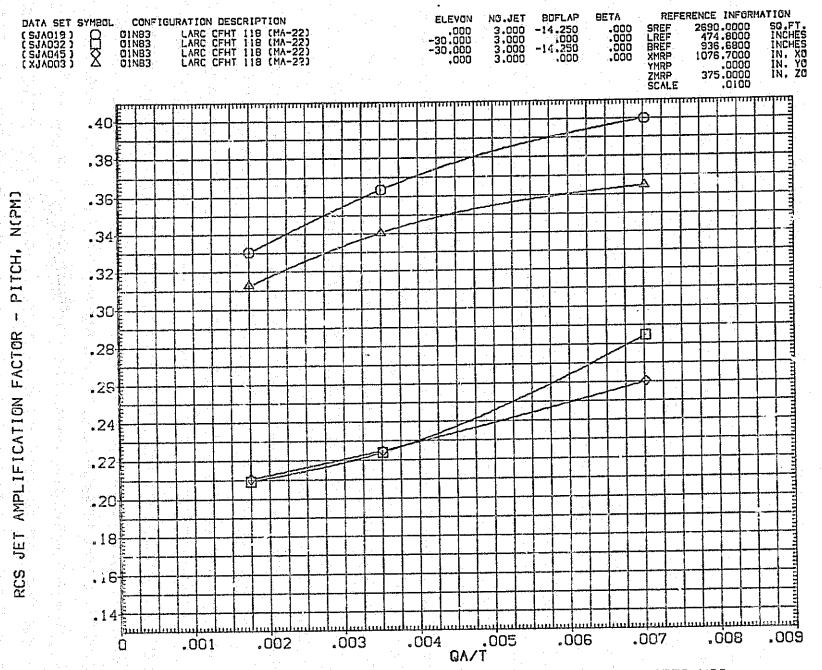


FIGURE 77. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N83

(E)ALPHA = 35.00

PAGE 1404

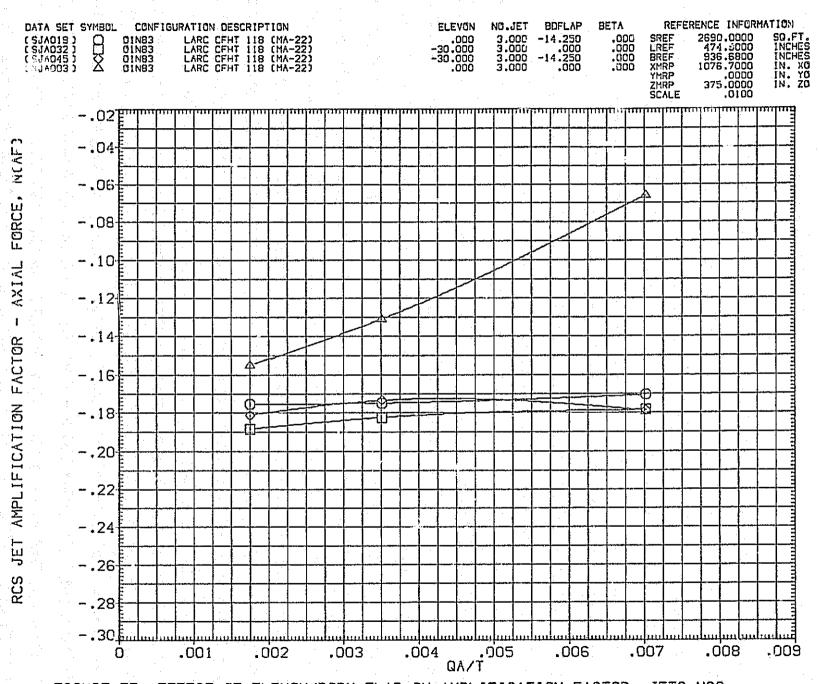
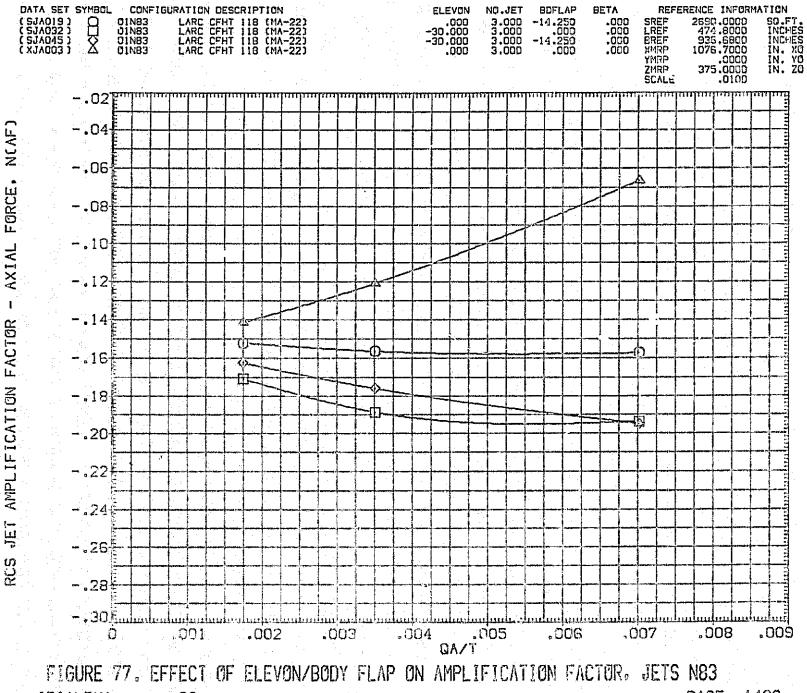


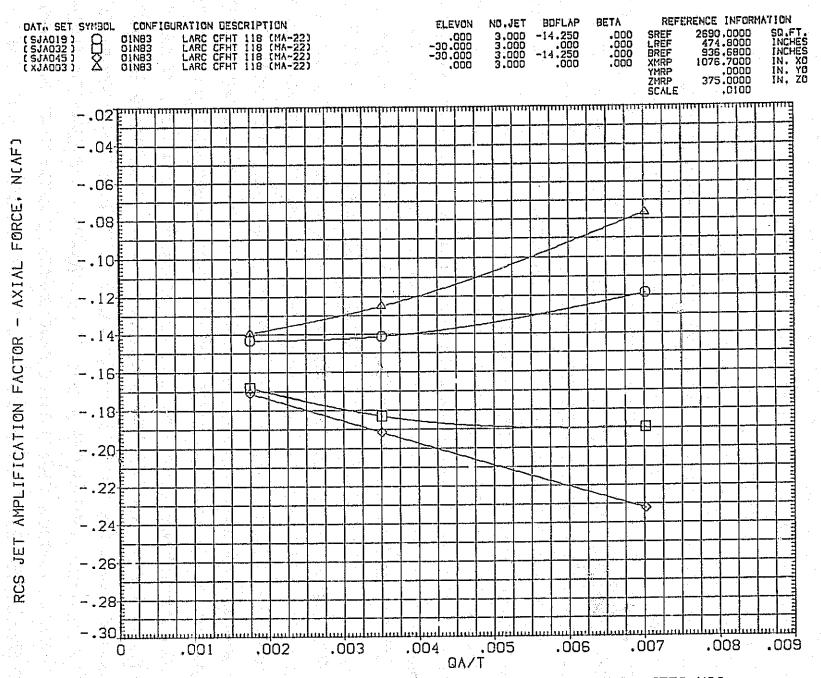
FIGURE 77. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N83

[A]ALPHA = -8.00

PAGE 1405



PAGE 1406 (B)ALPHA =.00



, A.

FIGURE 77. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N83

[C]ALPHA = 10.00

PAGE 1407

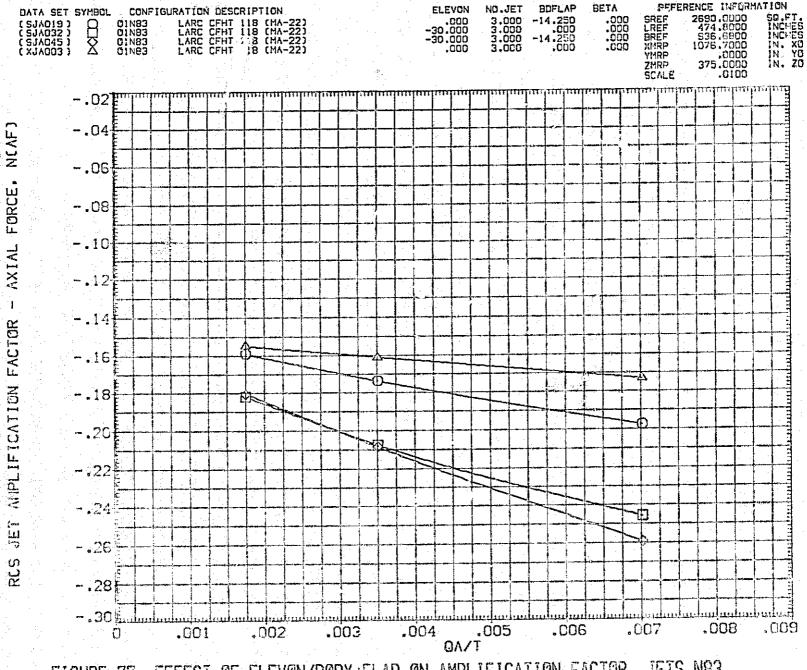


FIGURE 77. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR. JETS N83

CD)ALPHA = 20.00

PAGE 1408

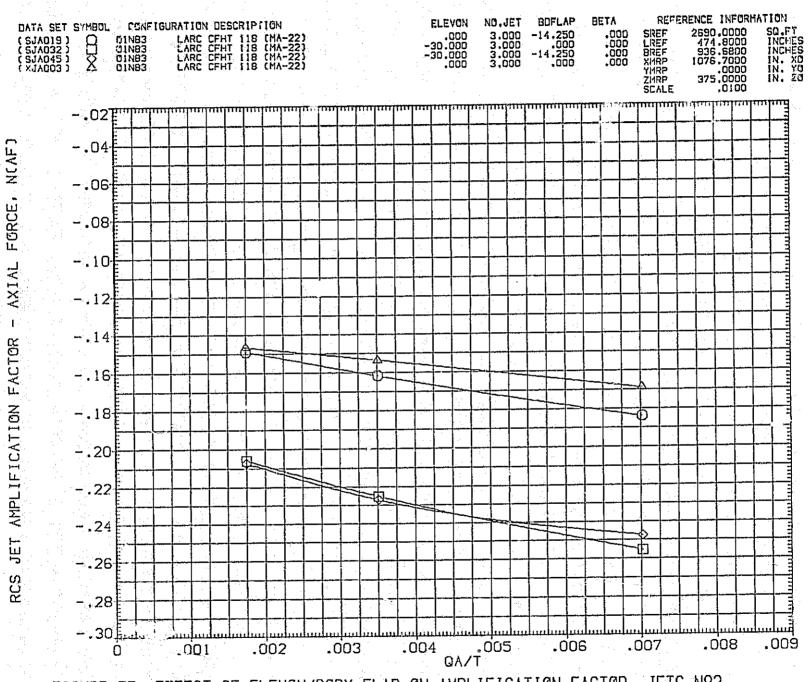


FIGURE 77. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N83

(E)ALPHA = 35.00

PAGE 1409

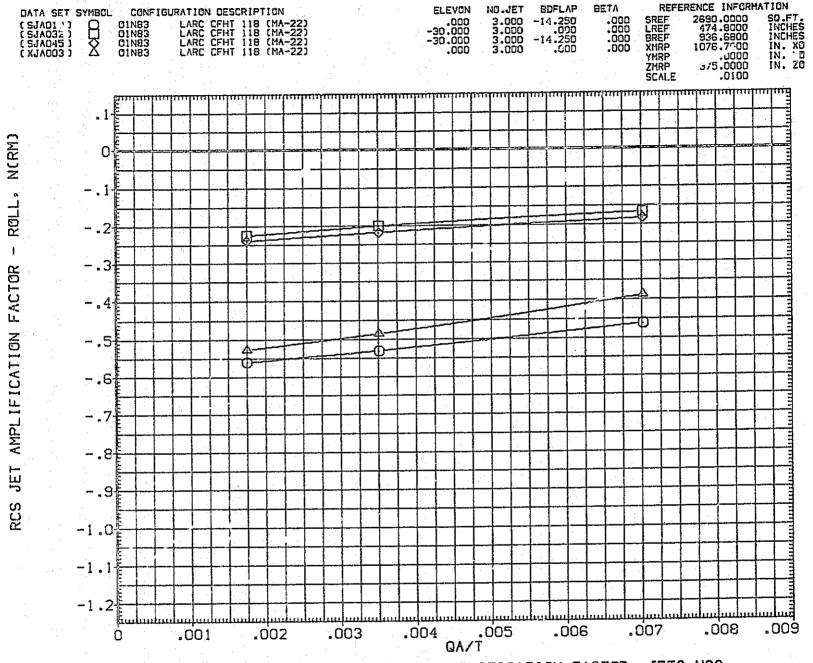


FIGURE 77. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N83

(A)ALPHA = -8.00

PAGE 1410

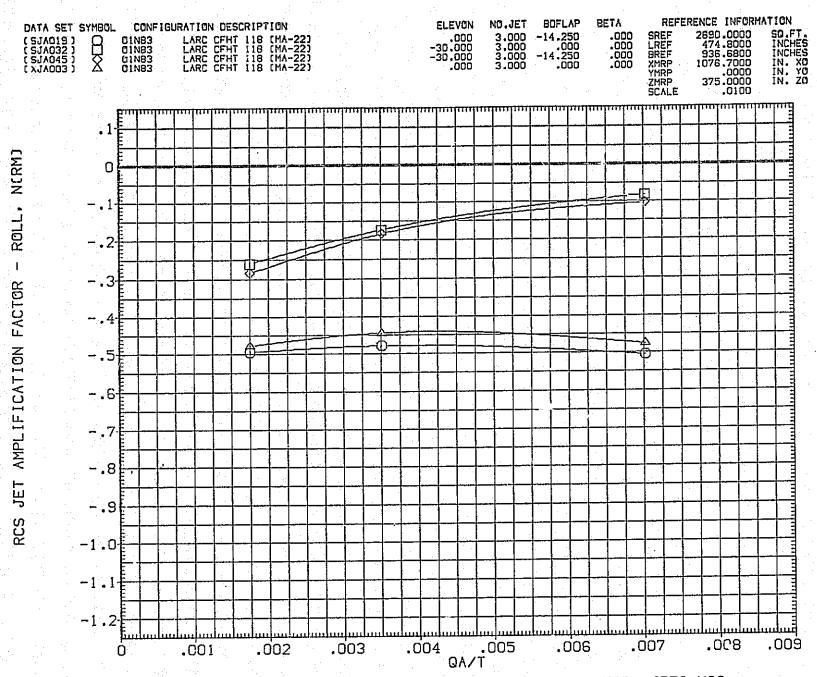


FIGURE 77. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N83

(B)ALPHA = .00

PAGE 1411

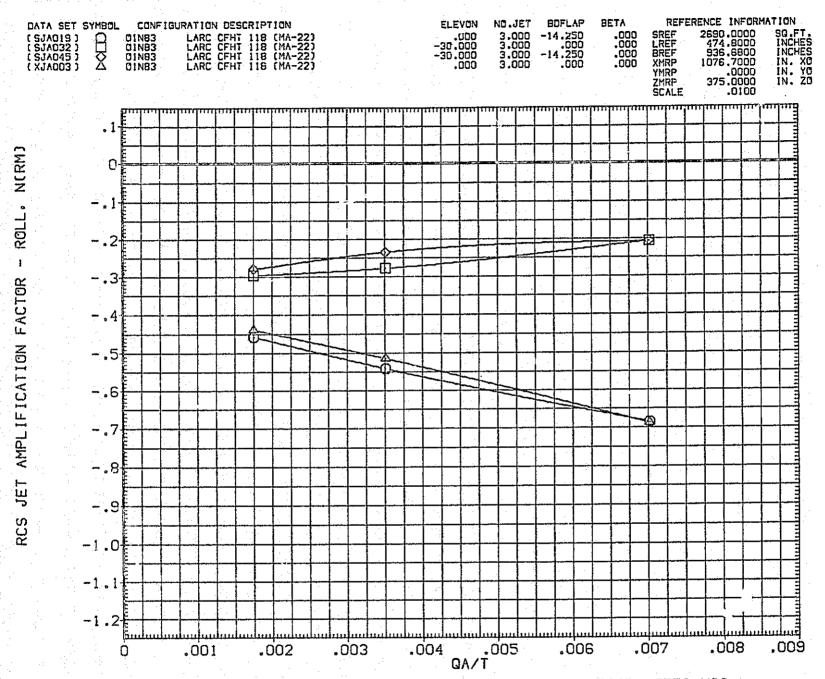


FIGURE 77. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N83

(C)ALPHA = 10.00

PAGE 1412

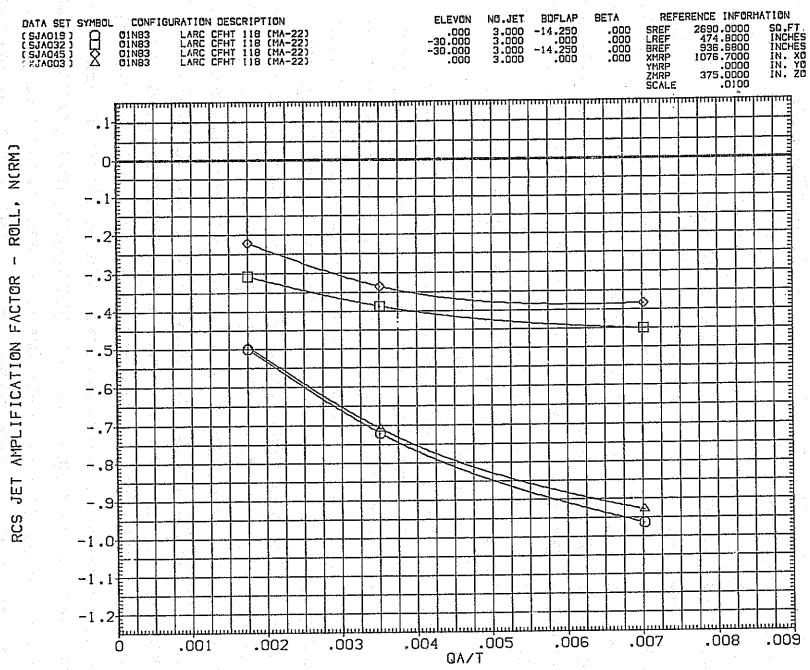


FIGURE 77. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N83

[D]ALPHA = 20.00

PAGE 1413

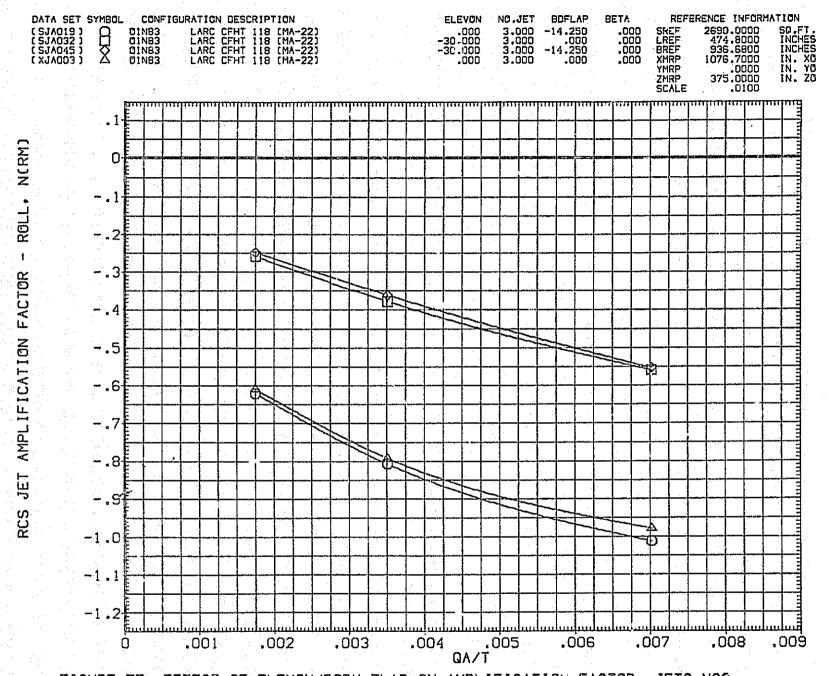


FIGURE 77. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N83

(E)ALPHA = 35.00

PAGE 1414

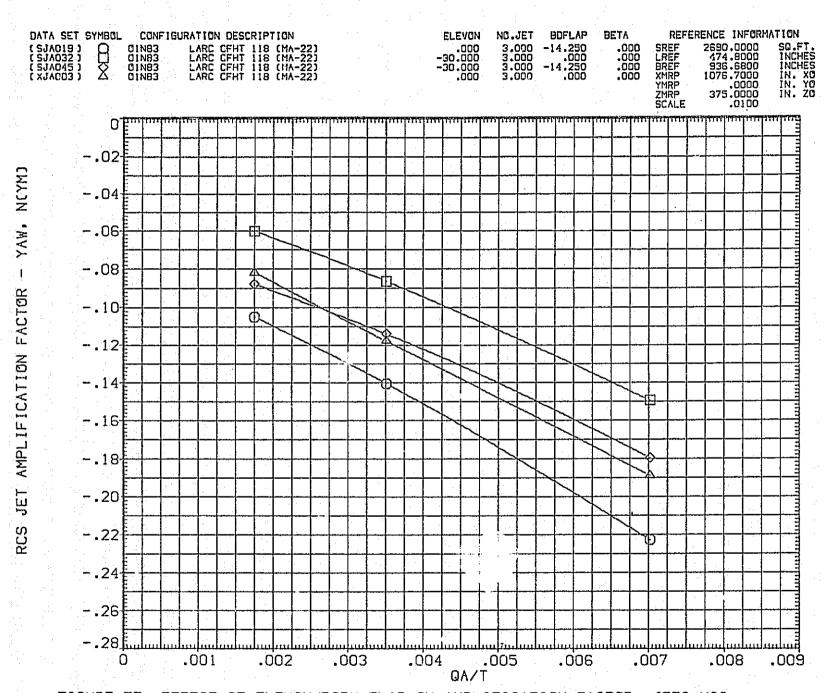


FIGURE 77. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N83

[A]ALPHA = -8.00

PAGE 1415

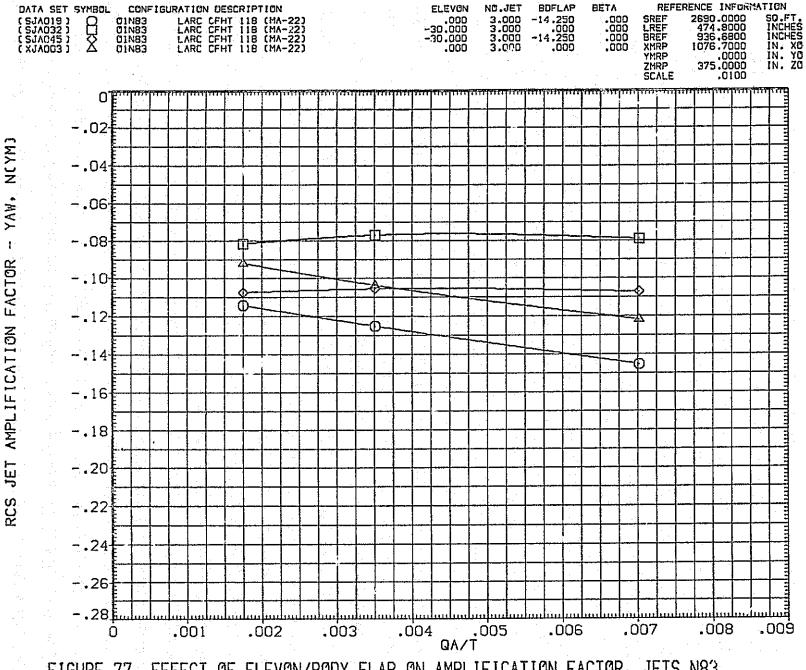


FIGURE 77. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N83

(B)ALPHA = .00

PAGE 1416



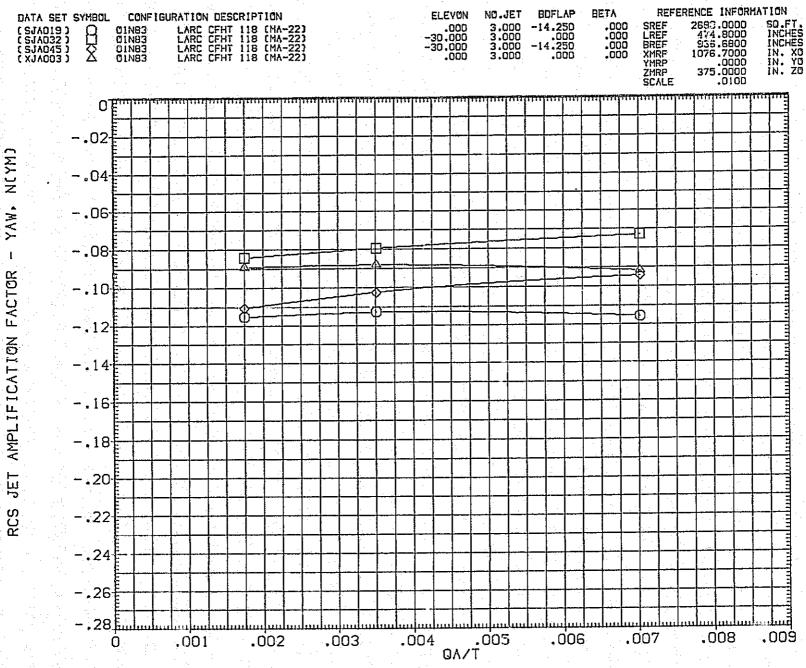


FIGURE 77. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N83

(C)ALPHA = 10.00

PAGE 1417

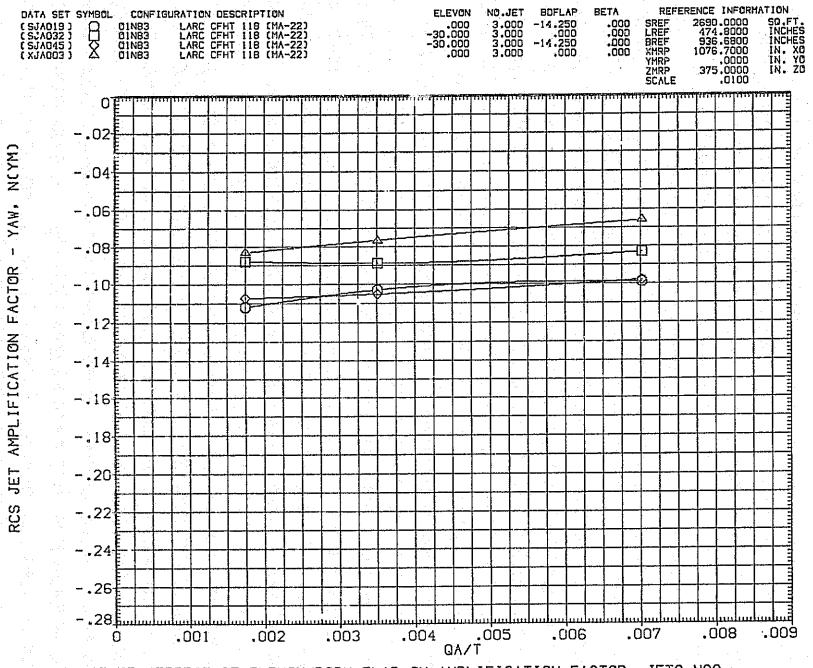


FIGURE 77. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N83

(D)ALPHA = 20.00 PAGE 1418

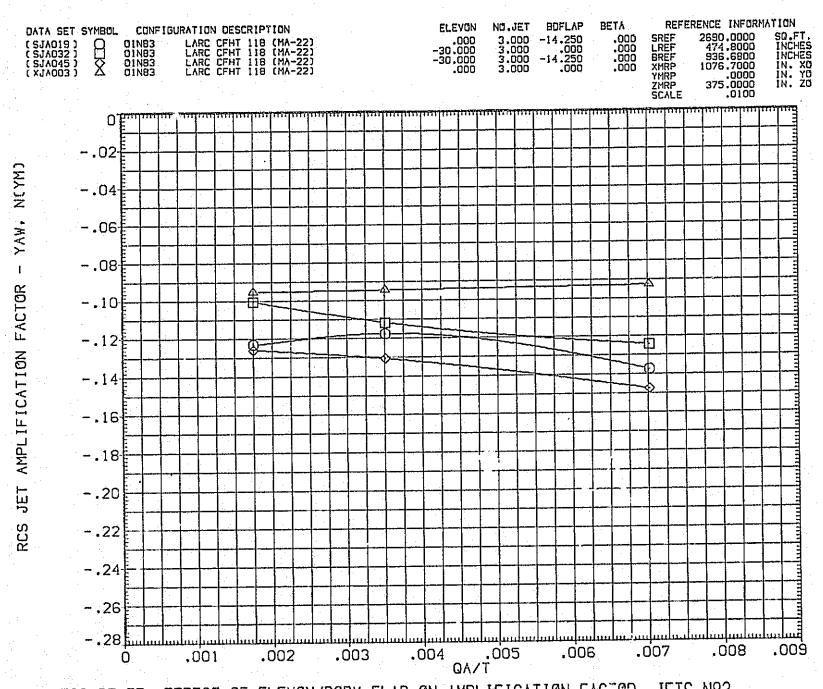


FIGURE 77. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N83

(E)ALPHA = 35.00

PAGE 1419

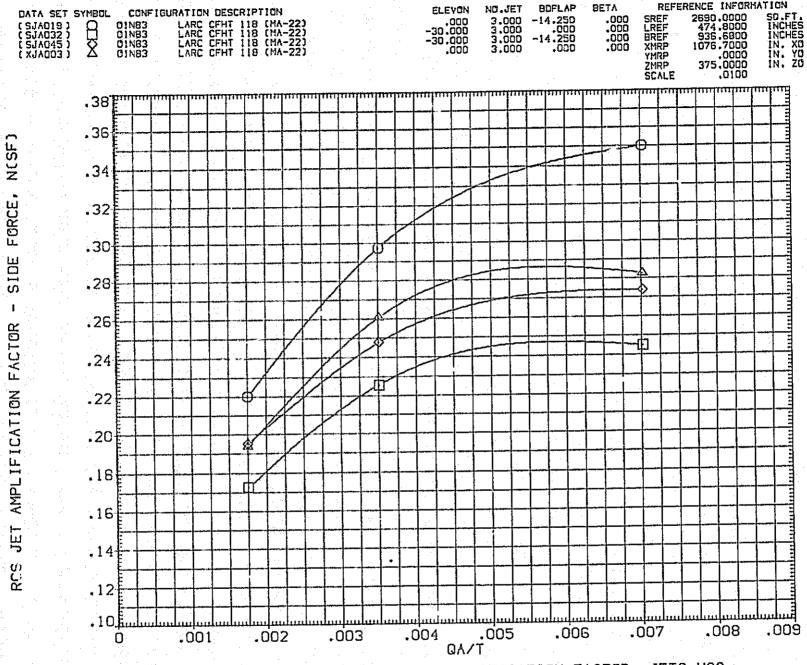


FIGURE 77. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N83

(A)ALPHA = -8.00

PAGE 1420

(---)

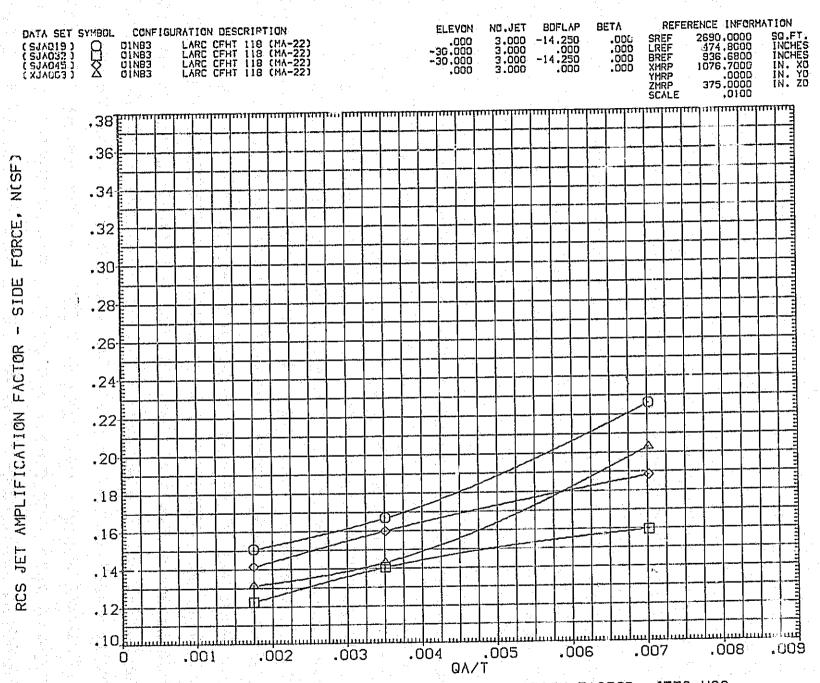


FIGURE 77. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N83

PAGE 1421

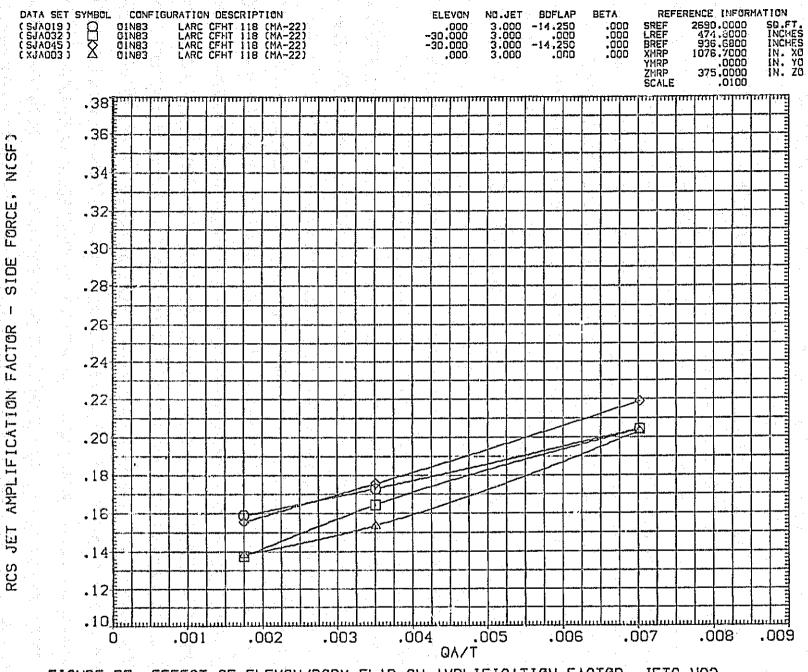


FIGURE 77. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N83

(C)ALPHA = 10.00

PAGE 1422

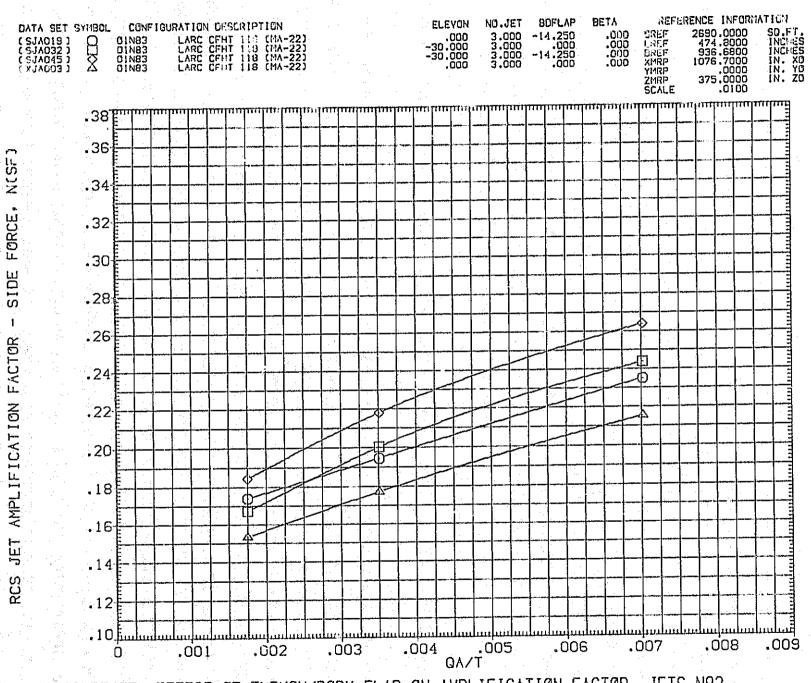


FIGURE 77. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N83

PAGE 1423

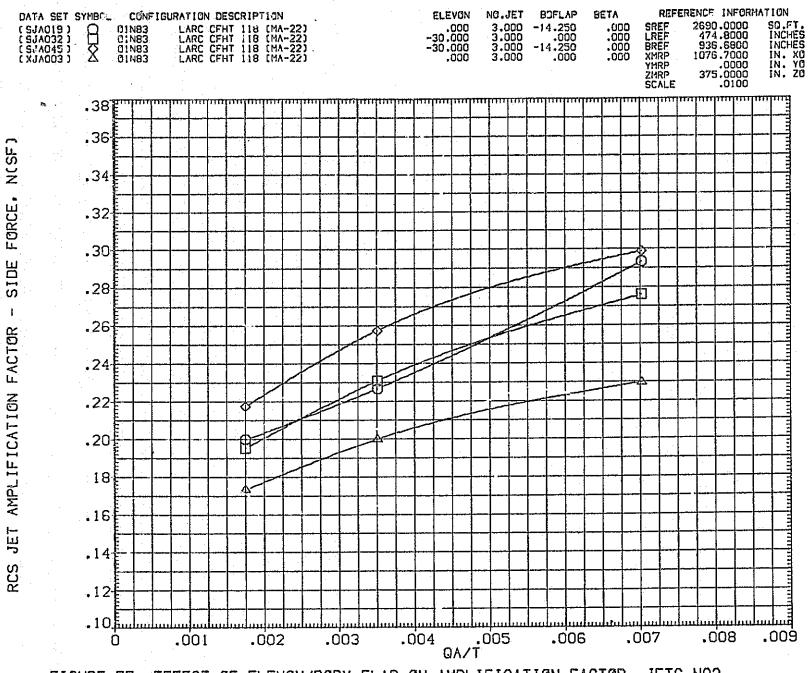


FIGURE 77. EFFECT OF ELEVON/BODY FLAP ON AMPLIFICATION FACTOR, JETS N83

(E)ALPHA = 35.00

PAGE 1424